

Modern

LITHOGRAPHY

MAY • 1945 • VOLUME 13 • NUMBER 5

ml



WAR LOAN

Permanent Blue Toner VP

Senelith Inks

were the first lithographic inks
made from dyestuffs
treated with sodium tungstate
for better sunfastness
and are still leading
with their outstanding resistance properties

The Senefelder Company, Inc.

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TRADITIONALLY PREFERRED FOR PRECISION PRINTING PRODUCTION



Beyond winning the war, the most important job is planning for the future. Right now the stage is being set for a period of unprecedented competitive selling. Manufacturers, whose products have gained new popularity during the war, will fight to maintain position. Other products, now curtailed for civilian use, will be aggressively pushed to regain their place. There's a vast job ahead for Advertising-Printing and its essential component, Paper. In the forthcoming "battle" for business, Northwest Pedigreed Papers will again increase effectiveness and insure production economy.

VICTORY *War Quality* PAPERS

THE NORTHWEST PAPER COMPANY • CLOQUET, MINNESOTA

MAY, 1945

3

**Give a man a press
he can run ...
a compact
understandable
standard, safe
and responsive
machine,
A MILLER AUTOMATIC
and profitable
operation is automatic
in more ways than one**

Miller



THIS MONTH'S COVER

During May this emblem of the Seventh War Loan will be seen across the nation. It is based on the famous photograph of the flag-raising on Iwo Jima, taken by Joe Rosenthal.

M A Y , 1 9 4 5
VOLUME 13, No. 5

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MODERN LITHOGRAPHY

Reg. U. S. Pat. Office

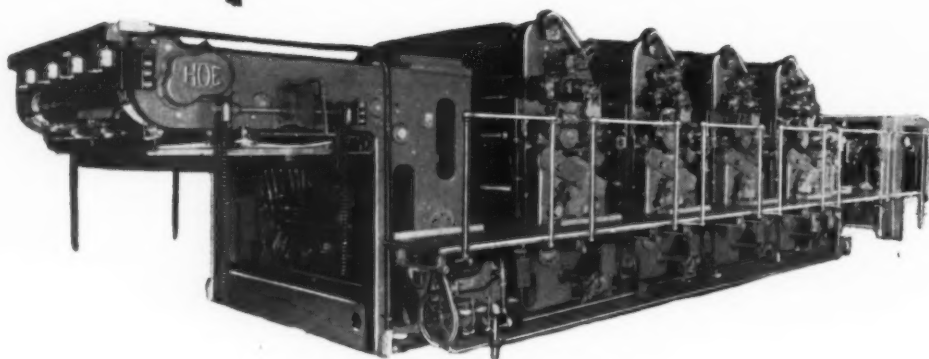
SUBSCRIPTION RATES: One year \$3.00. In Canada one year, \$4.00. Group subscriptions: Four or more entered as a group, \$1.50 each. (May be sent to different addresses.) Service Men: \$1.50 per year mailed to camp or post.

WAYNE E. DORLAND, President; GRANT A. DORLAND, Vice-President, IRA P. MACNAIR, Secretary-Treasurer. Published monthly on the 15th by The Photo-Lithographer, Inc., Advertising and Editorial Office, 254 W. 31st St., New York 1, N. Y. Advertising rates made known on application. Closing date for copy—25th of the month previous to date of issue. Entered as second class matter at the Post Office at New York, N. Y., under the Act of March 3, 1879.

for Profits from Color

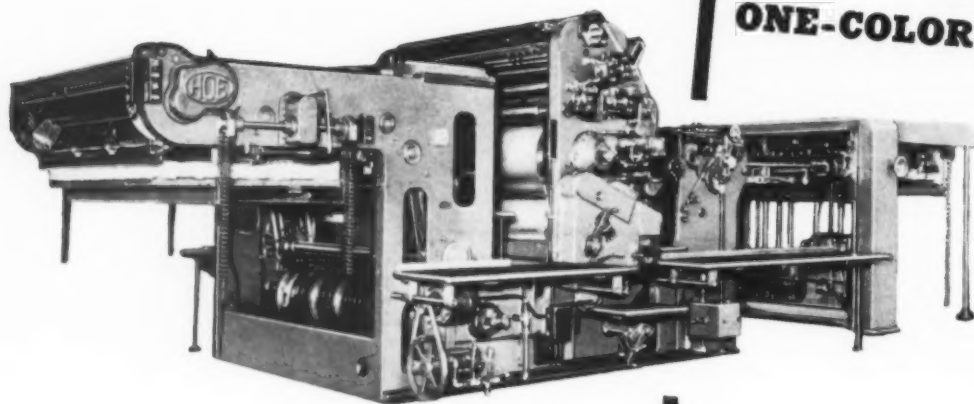
HOE FOUR-COLOR OFFSET PRESS

World's largest sheet-feed offset press. Lithographs four colors on one side of a 50" x 72" sheet in a single operation. For huge production at high speeds. Automatic register control — non-stop sheet registration — pre-registered plates — unequalled ink and water distribution.

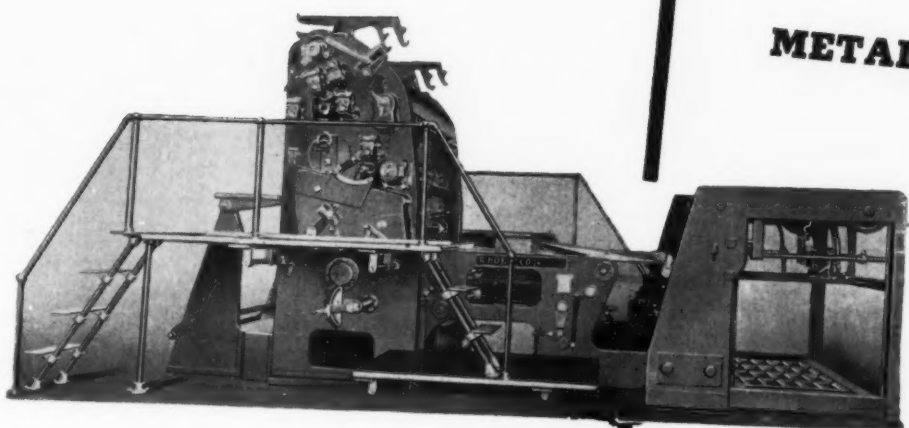


HOE ONE-COLOR OFFSET PRESS

For one-color jobs this press embodies all the other advantages of the large 4-color unit. Also models for two and three colors.



MODERN LITHOGRAPHY



HOE METAL DECORATOR

In sizes able to handle metal sheets up to 48" x 72". Giving fine quality production at remarkable speeds, these presses will accommodate a wide range of thicknesses in tinfoil, steel and aluminum.

Reaction from the drabness of war will bring more color into more phases of life, especially in advertising and packaging. This will entail a wider use of lithography as a practical and economical way of putting color to work on paper or metal. The lithographer who is prepared to produce finer color work with greater speed will naturally enjoy larger profits — this must be planned.

To you who recognize this necessity we present, on these pages, certain invaluable machines for the purpose — products of Hoe skill and experience in the lithographic field.

With their speed, capacity, accurate registry, fine printing quality, and safe, economical operation, these Hoe color presses hold excellent possibilities for increasing post-war profits in your plant. We invite you to plan with us now to that end.

PLAN NOW WITH HOE



ASSURE THE VICTORY . . . BUY MORE WAR BONDS

R. HOE & CO., INC., 910 EAST 138th STREET, NEW YORK 54, N. Y.

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MAY, 1945

7

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GRAPHIC ARTS INDUSTRY

A MAXIMUM OF SERVICE—through specialization and concentration in the GRAPHIC ARTS INDUSTRY.

A MINIMUM OF COST—in a year of lowered yield on assets invested predominantly in Government Bonds. **22% DIVIDENDS** on policy expirations of 1944 is a worthwhile **SAVING**.

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SURPLUS \$500,806.53—Almost the equivalent of 1944 premium writings amounting to \$550,636.47 (measure of risk assumed). **A MORE CONSERVATIVE RATIO** than generally prevails in the field of casualty insurance.

DIVIDENDS PAID TO POLICY HOLDERS REDUCE INSURANCE COSTS OF YOUR

Compensation and Automobile Liability Insurance

CHECK THE COMPANY . . . AT A GLANCE

1944 Premiums Written

\$550,636.47

1944 Assets

\$1,172,753.83

1944 Surplus

\$500,806.53

Condensed statement of the condition of the company as of December 31st, 1944

ASSETS

Cash On deposit with Bankers Trust Company, et al (except for \$10,643.94 in company's office)	Premiums in Course of Collection Due the company on policies just issued, excluding any premiums on policies more than ninety days old	Loss Reserve Set aside as required by law to meet future payments due or which may become due (including estimated expenses of investigation and adjustment on all accidents which occurred prior to date of this statement. . . .	LIABILITIES has six months to run; half the year's premium or \$50, is set aside as not yet earned
\$117,767.27	\$112,926.47		\$186,199.16
*U. S. Government Bonds Equivalent to more than 86% of all Bonds and Stocks held	Deposit in Mutual Corporations Reinsurance Fund On deposit jointly with moneys of other mutual companies, to be used in the event of a catastrophe loss—total in fund, \$558,224.16	State Industrial Commission Expense Estimated amount hereafter payable to New York State Industrial Commissioner, for expenses of administering the Workmen's Compensation Law	Other Liabilities Salaries, Taxes, etc., due but unpaid as of date of this statement, including \$500,000 estimated Income Tax liability
724,500.00	34,458.25		\$396,452.17
108,745.30			19,277.74
Mortgages First Mortgage Loans on improved New York City real estate	Interest Accrued, etc. Interest earned to date, payable within the next six months	Unearned Premium Reserve Pro rata portion of premiums unearned on policies which have not expired. For example: a premium for a \$100 policy	Contingency Reserve Representing difference between total values carried in assets for all bonds and stocks owned and total market value December 31, 1944
	39,632.79		27,658.15
Real Estate Acquired as a result of foreclosures	30,000.00		Dividend Reserve Set aside to meet future payments on unaudited policies expiring up to and including January 31, 1945
			37,582.82
			\$671,947.30

SURPLUS

\$500,806.53

* Bonds and Stocks valued on basis prescribed by the New York Insurance Department. Securities carried at \$263,500.00 included above are deposited as required by law.

Reinsured against any one loss, without limit, in excess of \$10,000.00.

NEW YORK PRINTERS & BOOKBINDERS
MUTUAL INSURANCE COMPANY

C. F. Von Dreusche, Pres. and Gen. Mgr.

147 FOURTH AVENUE

Telephone GRamercy-7-6530

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NEW YORK 3, N. Y.



VALETTE PRODUCTS STILL IN UNIFORM

Our war job is not yet finished. Our large and modern facilities are still straining to meet the demands of war for precision products in large volume.

However we have never lost sight of our obligation to the many users of Valette products whose peacetime purchases made it possible for us to have valuable production and engineering facilities to offer our country when war came.

Valette platemaking equipment has built a reputation for dependability in meeting lithographers' needs. Our war experience and research have resulted in developments that will assure future lithographic equipment of superior design and performance. In the event the end of hostilities in Europe bring a scaling down of war contracts, our plans are made to devote as much production as possible to serve lithographers. Plan to discuss your equipment plans with us now.

PEACETIME MANUFACTURERS OF

CAMERAS, WHIRLERS, PRINTING FRAMES, PROVING PRESSES, LAYOUT TABLES, ETC.

LITHO EQUIPMENT AND SUPPLY CO.

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75 years of service to
the entire lithographic field "ever since
the stone age



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(ESTABLISHED 1870) • DIVISION • GENERAL PRINTING INK CORPORATION

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BOSTON CHICAGO CINCINNATI CLEVELAND PHILADELPHIA ST. LOUIS
SAN FRANCISCO FORT WORTH LOS ANGELES TORONTO, CANADA



L N A Message

For the past several years The Fuchs & Lang Manufacturing Co., Division of General Printing Ink Corporation has made available to the Lithographers National Association the reverse side of its color insert in the May trade magazines for the purpose of conveying a convention message to the lithographic industry. We appreciate the courtesy extended to us again this year, although because of the restrictions and limitations imposed by the Office of Defense Transportation it will be impossible this year to hold our usual annual convention.

This will be the first year since the Association was incorporated in 1906 in which there has not been held an annual convention. In recent years these meetings have been devoted to the development of a better understanding of the wartime job of the lithographic industry and to a fuller understanding of the various wartime restrictions—both as to manpower and as to materials—under which the industry operates. It is at considerable sacrifice, therefore, that this year's convention is deferred.

In the space of these few paragraphs, this Association would pay compliment to the character of the wartime job which the lithographic industry has accomplished. The fact that the brunt of the military demand for maps, charts, manuals and other instructional material fell upon the lithographic industry is not alone because of the versatility of the process but also because of the ability of the industry to manufacture and deliver on exceedingly short notice—a tribute to the kind of management which characterizes this section of the graphic arts. Time and again lithographers have sacrificed the opportunity of servicing long-time customers, have repeatedly upset production schedules on commercial work and have done whatever else might have been necessary to see that urgent government requirements were met on time. It is impossible to estimate the overall volume of government work but for an industry

no larger than this one is, it would be an impressive total were it available—no less impressive than the many letters of commendation from government departments, various citations and other verbal and written communications from various government agencies expressing their appreciation of the job which is being so well performed.

On behalf of the Lithographers National Association it may be simply stated that every other consideration has been set aside and to the fullest extent possible the full facilities of this organization have been devoted to the industry's war job and to the proper conservation of its manpower and other resources. Our active planning with certain governmental agencies began as early as February 1938, so that a proper basis might be laid for a prompt and full realization of the commercial industry's capacity to produce during just such a war emergency as that in which we find ourselves.

On the basis of service rendered, we have enjoyed a steady increase in membership. In the future as in the past we shall continue to serve the legitimate needs and interests of the lithographic industry, cooperating with other organizations on matters of common interest to the entire Graphic Arts Industry but concentrating the energies of the lithographic industry itself on those problems which are peculiar to it. Thus, in an age of specialization, the industry enjoys the advantages of specialization in its own trade association. Progressive lithographers—both large and small—have thus shown their belief in the value of cooperation in the furtherance of their own well being. You, Mr. Lithographer, who may not now be a member, have it in your power to increase the effectiveness of this Association in its services to the Industry.

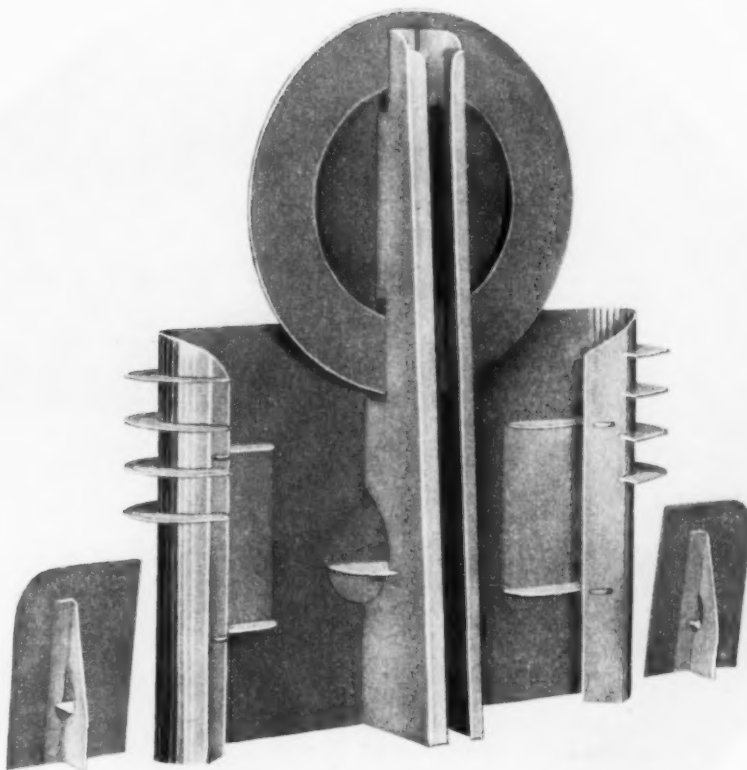
Won't you act now?

Lithographers National Association Incorporated
420 LEXINGTON AVENUE • NEW YORK 17 • N.Y.



with Displays—like Diamonds . . .

*A typical example
of Cardboard En-
gineering showing
the "backing
needed to put up a
good front."*



it's Planning+Cutting+Mounting & Finishing that Counts

DIAMONDS in the rough . . . and Ideas for Store and Window Displays . . . have one thing in common. Their full value is brought out only through coordination of careful planning and painstaking craftsmanship.

Our part in the construction of Point-of-Purchase Displays concerns itself primarily with engineering design that exploits selling ideas conceived by Display Creators. And with those diecutting, mounting and finishing operations that complete the ensemble . . . plus packing and shipping.

Our roster of customers in the trade reads like the "Blue Book of Lithographic Aristocracy." After the war we hope to expand it.

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Sales & Service
Affiliate: *The Mounting & Finishing Company, Inc.*

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One Pound of Waste Paper }
makes two Blood Plasma Boxes }



Hero's Life—*wrapped in Paper*

He's been hit.

The medic rips open the heavy paper carton, unwraps the corrugated paper and takes out the plasma bottle. Thank heaven it came through undamaged! For this may save a hero's life.

Paper protects lifesaving plasma right from the donor center to the front line. Paper protects it against shock of shipping, trucking, parachuting and war's rough handling.

In fact, paper is so important to the armed services that they have 700,000 vital uses for it. Cartons that contain vaccine bottles, emergency rations, life-preserver lights—these are but a few of the uses.

To meet a greatly stepped-up demand

we've just got to salvage more paper. We must do this no matter how well the war progresses for us.

School and city groups are in the paper salvage fight. Boy Scouts, Girl Scouts, Brownies, and the American Legion are among those enlisted.

But without you—the citizen who ties up a bundle every week and gives it to the collector—the entire paper salvage drive would bog down.

Don't weaken now. You have done a swell job so far. Get that bundle of old paper ready every week. Make sure it is collected. If it isn't, phone the American Legion, the Scouts, or the City, and urge your neighbor to do the same.



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and West Carrollton, Ohio

WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.



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MODERN LITHOGRAPHY

TO HELP A BUSINESS MAN MAKE A BUSINESS DECISION



Get the ATF man to help you NOW!

PRINTING is more than a craft...it's a *business*, and the printer who is a business man must look ahead.

How do you compare with your competitors on service to your customers? Some customers drift away from every business...how are you planning to replace them? Can you use your present production as a basis for specializing in some particular kind of work? Are your customers permanently located and growing? Or will they fade out after the war?

Only you can answer these questions, but the man who represents ATF can give you invaluable help on these larger concerns of management, as well as on equipment. He'll be glad to tell you what concrete steps you can take now, to prepare for "tomorrow's" printing...so, when you have a business decision to make, start by asking your ATF representative.

If you would like to have a copy of ATF's "PLAN NOW for TOMORROW'S PRINTING," ask the man who represents ATF, or write to



ATF

AMERICAN TYPE FOUNDERS • 200 Elmora Avenue, Elizabeth B, New Jersey

3 Helpful Sales Aids for Printers by...

Here's timely, practical help for printers, lithographers, engravers and paper merchants. Each of these aids will help you increase your letterhead sales. A truly fine letterhead paper, promoted with both direct mail and consumer advertising, will increase your profits, satisfy more customers.



1 COMPLETE LINE OF QUALITY PAPERS

When the product is right, sales increase and repeat business is assured. Included in the Fox River line of paper is Anniversary Bond 100% rag content paper. This crisp, brilliant paper makes the finest letterhead stationery obtainable.



2 HELPFUL COMPARISON KIT FOR YOUR DIRECT MAIL, SALES CALLS

This unique "See For Yourself" demonstration kit makes it simple for busy executives to test the relative qualities of different grades of paper. Its interesting contents make it a valuable paper sales aid. Write for a copy today.



3 ADVERTISING TO EXECUTIVES AND OTHER PAPER USERS EVERY MONTH

Consistent timely ads in selected consumer magazines — Dun's Review, United States News, Banking, Purchasing, Printers' Ink and Direct Advertising tell the story of Fox River Papers to almost 100,000 top-flight executives and users of fine business papers... your best prospects for profitable letterhead papers.

FOX RIVER

Fine Papers

FOX RIVER PAPER CORPORATION

406-E S. APPLETON AVE., APPLETON, WIS.

MODERN LITHOGRAPHY



CHARTING THE COURSE OF *Victory!*



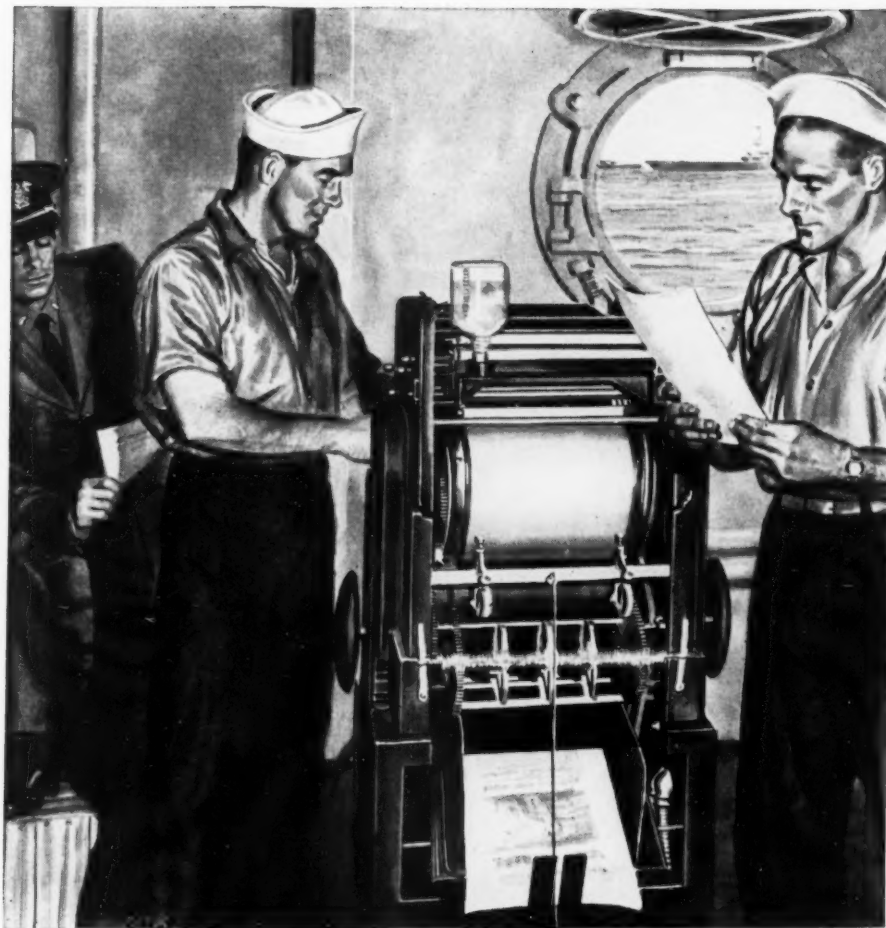
Note These Important Davidson Features

- 1 Produces fine offset work using both direct offset plates (paper or metal) and photographic offset plates.
- 2 Produces relief work using type, electros, and rubber plates.
- 3 Change-over from offset to relief requires only about ten minutes.
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- 5 Automatic suction paper feeder equipped with double-sheet throw-out.
- 6 Provides full ink coverage.
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- 10 Sturdy, rugged construction.



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It tells the complete story of the Davidson... anticipates your questions and answers them fully. Also included are samples of the work it does. Write today... no obligation.



BACK of the attack are days and weeks of planning... of details carefully worked out... so every unit, every ship, every man shall know the time and place for every move. This requires endless paper work... reports, maps, charts, reconnaissance pictures... hundreds of copies of them... clean, sharp reproductions without a single detail missing.

On battleships, carriers, cruisers, repair ships, and hospital ships and at far-flung Naval bases, this important duplicating is done with a new type of equipment... the Davidson... chosen because of its remarkably fine work, high production speed, and rugged dependability.

Here at home, the Davidson is

proving its worth as a profit maker for lithographers and printers. Unlike any other equipment, the Davidson will reproduce from direct offset plates, photographic offset plates, type, electros, and rubber plates... *all with the same machine.* Its fast, economical operation, clean, sharp impressions, accurate register, and excellent halftone work combine to insure profits on a wide variety of work... letterheads, office forms, envelopes, advertising folders, post cards, blotters, shipping tags, etc., and all kinds of imprinting. And you can get any job under way in an amazingly short time.

Why not get the facts about this modern machine... today?

DAVIDSON MANUFACTURING CORPORATION

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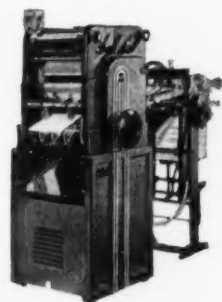
Agents in principal cities of U. S., Canada, Mexico

Davidson Agents offer a complete plate-making service and carry a full line of Davidson plate-making equipment, accessories, and supplies



PRODUCE IT ON A

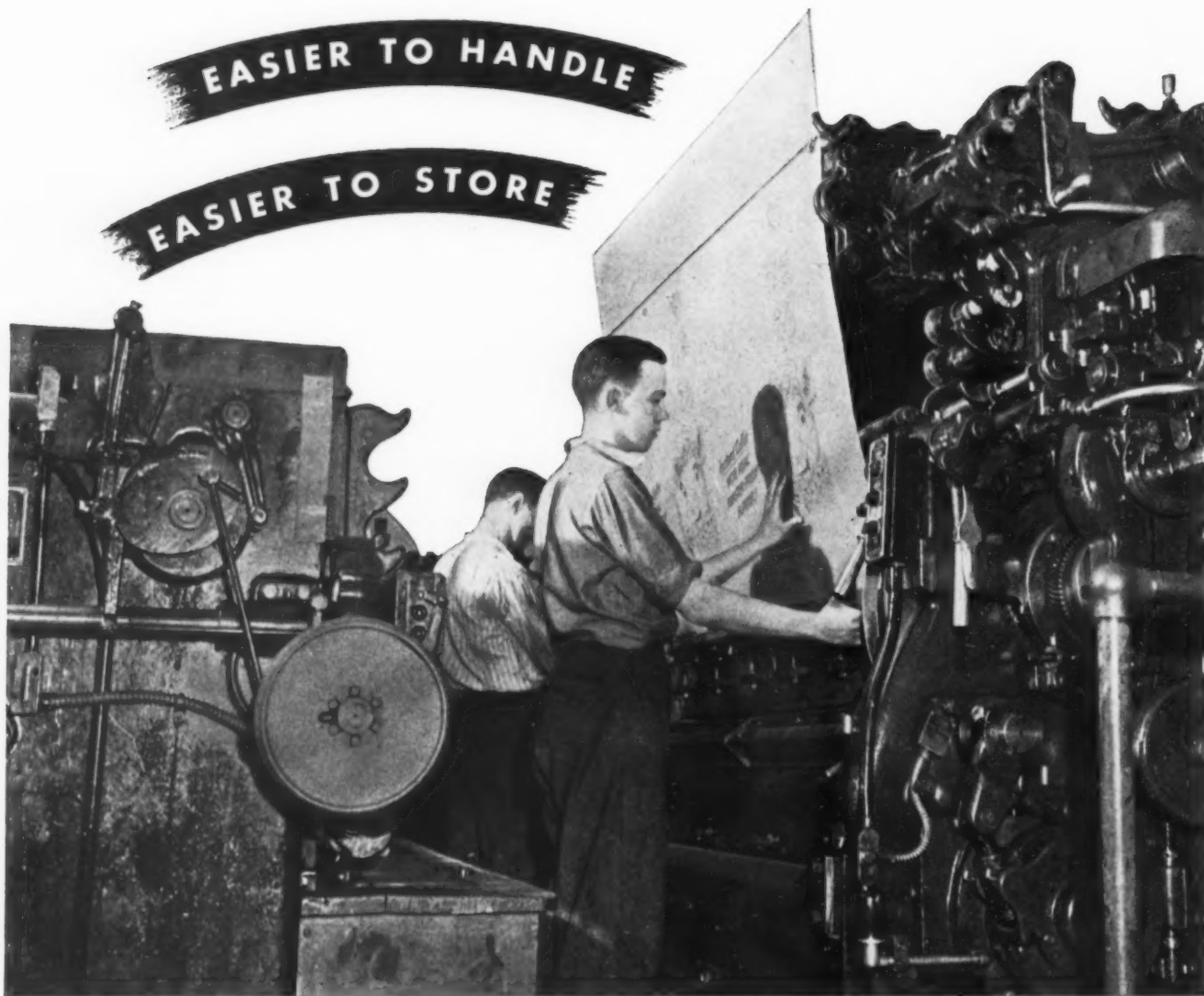
Davidson



Aluminum Plates are . . .

EASIER TO HANDLE

EASIER TO STORE



Putting aluminum litho plate on one of the presses at Kindred-MacLean & Company

Lightweight, long-lasting aluminum litho plates have been used exclusively for over 17 years at Kindred-MacLean & Company, New York City. Alcoa Aluminum Lithographic plates are

helping lithographers everywhere turn out better work of all types. Ask your distributor for them, or write ALUMINUM COMPANY OF AMERICA, 2123 Gulf Bldg., Pittsburgh 19, Pa.

ALCOA

ALUMINUM LITHO PLATES



DESIGN FOR WINNING

BUY BONDS
It's your

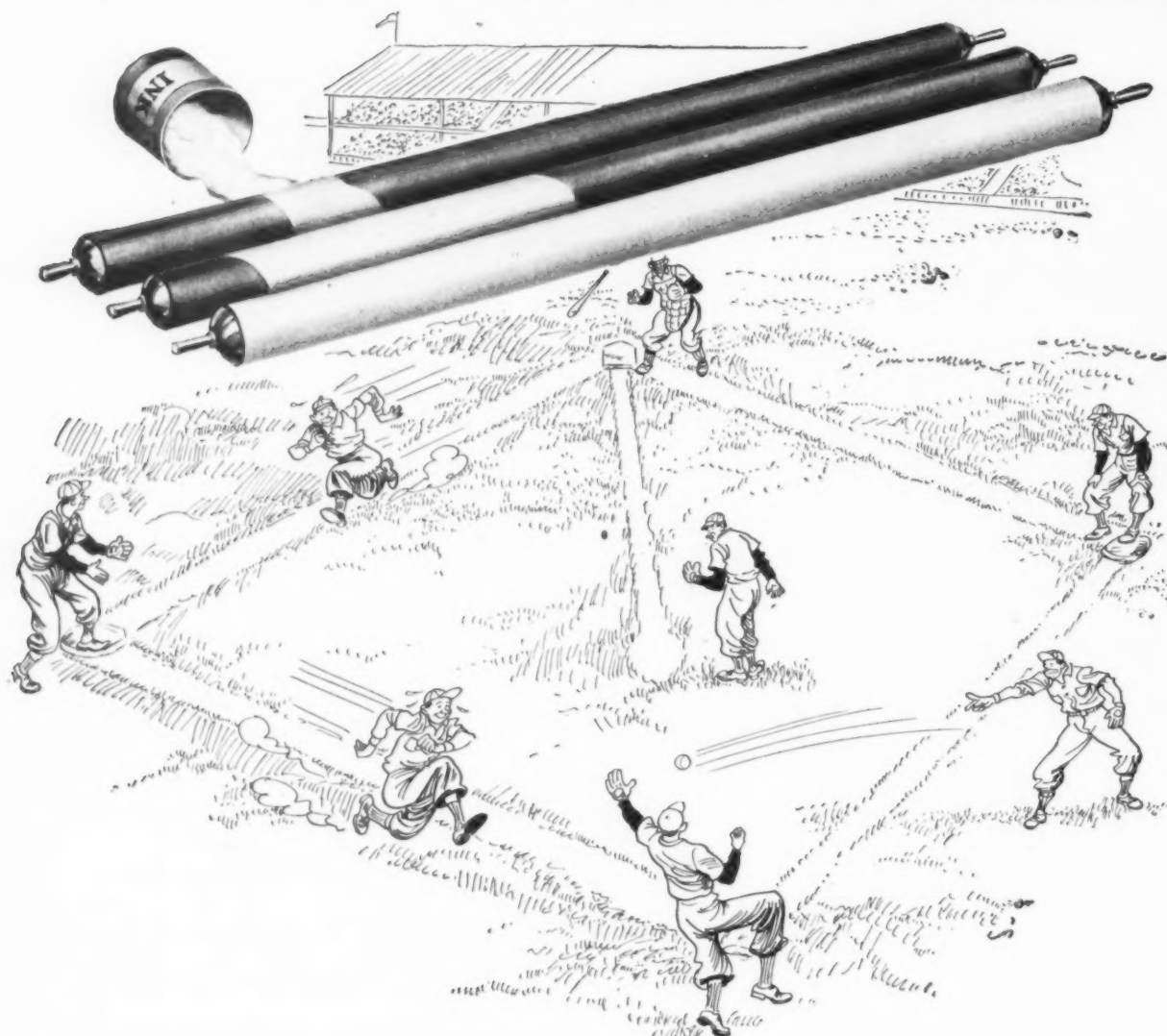
Never losing sight of the importance of words at war . . . and the essential role of the lithographer, Pitman has continued the development of more effective chemicals, has designed equipment specifically for war use and has endeavored to keep the lithographic industry supplied with all its production needs for every lithographic operation.

THERE'S A PITMAN PRODUCT FOR EVERY LITHOGRAPHIC NEED

Harold M. **PITMAN** *Company*
LITHOGRAPHIC EQUIPMENT AND SUPPLY DIVISION

CANADA: Laflynor, Ltd. 90 Niagara St., Toronto	1110 - 13th Street NORTH BERGEN, N. J.	51st Ave. & 33rd St. CHICAGO, ILL.	PACIFIC COAST: G. Gernert, 1122 Webb St., Los Angeles
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From Tinker to Evers to Chance!



Unity of performance from Ideal Synthocraft Rollers is another world-beating combination that will give you quality results time after time.

You want rollers that will pick up ink and pass it on down the line in smooth, velvety distribution. You want rollers that will maintain uniform distribution regardless of the solids in your forms. You want Ideal Synthocraft rollers.



**Save more than ever
before.
Stop inflation!**

There are no ink-starved spots on Ideal Synthocraft rollers. They give out instead of drinking in! You can change to light tints and get clear, clean colors with no fouling from previous inking. You can get moisture control steadily and regularly.

Synthocraft rollers are easy to clean, easy to handle and easily produce quality offset work that will win you new customers by the score. How about giving Ideal Synthocrafts a chance at bat?

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Put Your Best Foot Forward—With Crescent Inks



CRESCENT INK AND COLOR CO.

464 N. Fifth Street

Philadelphia



MILLION MILE YARDSTICK..

You'll need a brand new set of standards to measure paper uses in business and industry after the war. Paper has been put to work doing things and being things you've never dreamed paper could do or be.

These really astonishing war-born paper developments will introduce new efficiencies and new economies to millions of factories, stores and offices when peace returns.

Right now, of course, paper's new forms and adaptations are restricted information.

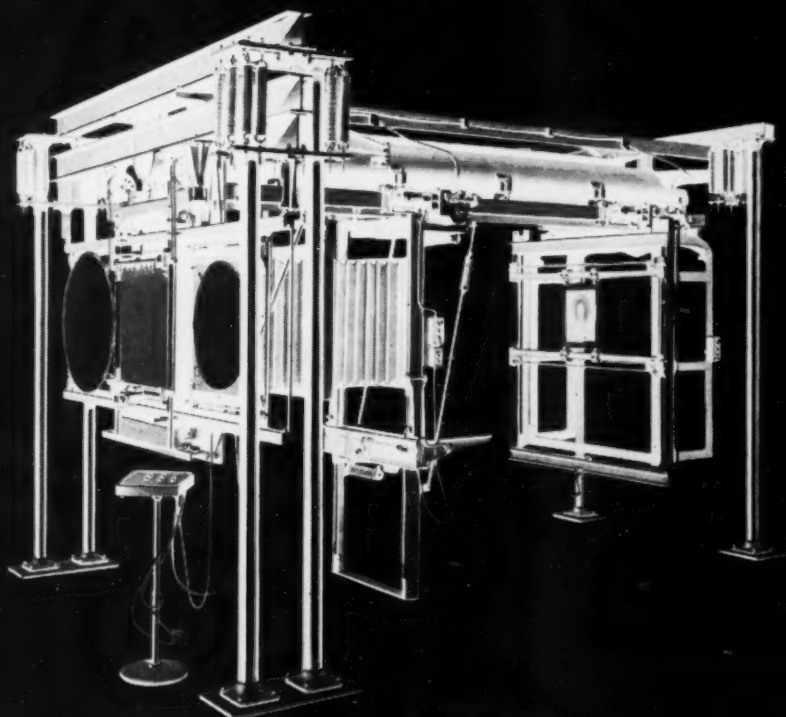
But when the veil of secrecy is lifted, and our war responsibilities are fulfilled, we'd like to tell you about paper as you've never known it before.

NEENAH

Makers of Fine Papers

NEENAH PAPER COMPANY • NEENAH, WISCONSIN

MODERN LITHOGRAPHY



MONOTYPE CAMERAS **Go to War!**

Of the strategic materials necessary to assure victory in our efforts to preserve our liberty and the sanctity of American standards of life, among the most important are the tools of production and use. These include not only the machines required to make planes and tanks and guns, etc., but also the instruments and maps and charts by the use of which the implements of war may be directed to their objectives.

We at Monotype derive satisfaction from the fact that Monotype-Huebner Cameras are playing an important part in helping Uncle Sam and his Allies in their fight against the aggressor nations. We are very proud that various branches of service in the U. S. Army, the Navy and the Marines, as well as the combat forces of the Allied Nations, are using our cameras in connection with aerial mapping operations in the field, in ordnance surveys,

and in making huge reproductions of maps for permanent files; that aircraft manufacturers find them of immense value in making the templates used in the production of bombers, fighters, pursuit ships, interceptors and transport planes, and that commercial installations everywhere are being used in Government work, both in our country and abroad. In Great Britain, Canada, Iceland, Australia, Africa and in the Pacific, M-H Cameras are at work in behalf of our common cause.

It is our purpose to continue to give full cooperation to our Government in providing for national needs. We hope that our customers and other good friends will understand that the production of cameras for commercial use must, in all instances, be subordinated to Government requirements, and that they will cooperate with us in meeting the situation. We will continue to render service to the absolute limit of our ability.

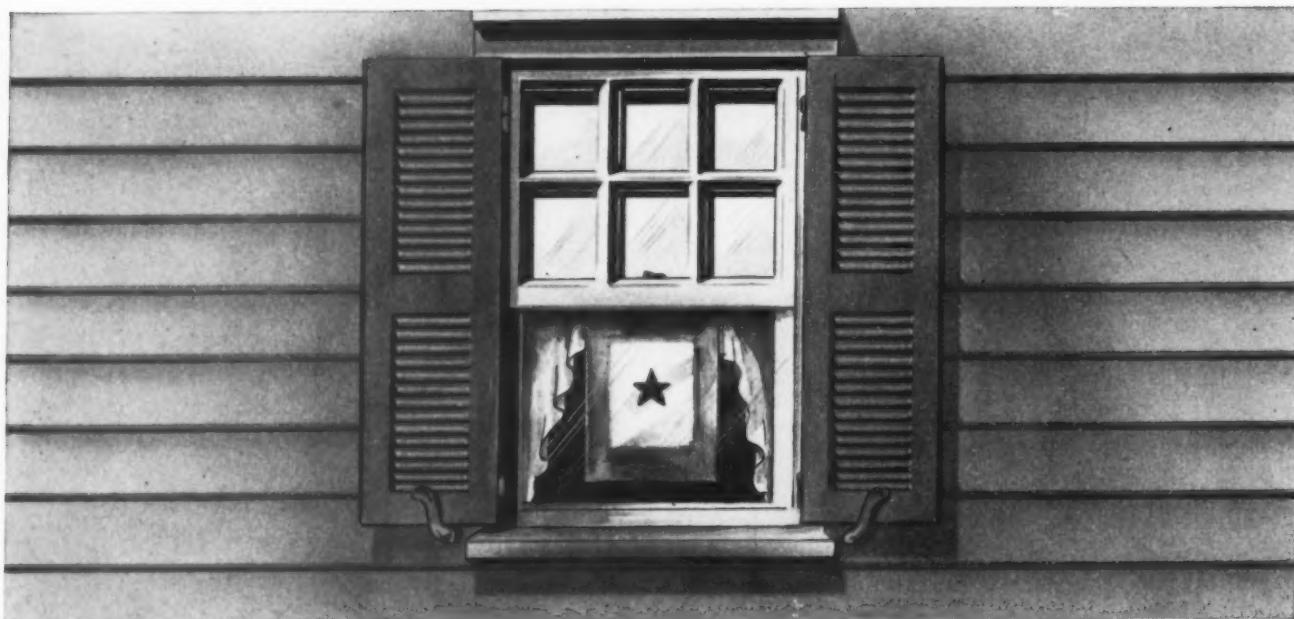
 ★ **BUY** ★
 ★ **BONDS** ★
 ★ **NOW!** ★
 ★ *****

Send for Folder Showing Monotype-Huebner Photo-Template Camera in Action

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING • TWENTY-FOURTH AND LOCUST STREETS • PHILADELPHIA 3, PENNA.

Composed in Monotype 20th Century Family and Monotype Bodoni, No. 375AC



STAR IN THE WINDOW

In thousands of windows — in the wayside cottage and the teeming tenement — there hangs a symbol . . . the service star. Some are blue; too many are gold. These symbols represent a willingness, by Americans everywhere, to fight and work for their ideals and concepts of individual freedom.

Today, all Americans are contributing their efforts toward Victory; some to a great extent, others to the limit of their capabilities.

We've never spoken about our wartime efforts because we feel that what we have done was our plain duty. Our products are being used in the making of vital war lithography, and we've often felt the pinch of wartime restrictions. But we've satisfied every demand made on our services by the government and private industry.

So, in our window, there also hangs a service symbol. It represents our readiness, willingness, and ability to answer any call for increased effort until V-Day is here.

Our complete line of high quality LITH-KEM-KO offset chemicals is listed and described in a new catalog. Your copy is awaiting you. Send for it — **TODAY.**

**LITHO CHEMICAL
& SUPPLY CO., Inc.**
63 PARK ROW, NEW YORK 7

LITH-KEM-KO
PRECISION
USED AROUND THE WORLD
UNIFORMITY
EST. 1929

"TO SEE WHAT HE COULD SEE"

Bear or man, it's often
good to stop a moment
and look things over.



Lithograph by James E. Allen

A glance around at the paper industry is encouraging on the whole. Of course, in the foreground we see that paper is still on the critical list. Conservation is still important, and will be increasingly so until the two wars end. But, on all sides — a hearty and patriotic cooperation has manifested itself; cooperation between millman, distributor, printer.

The paper user too has learned some valuable lessons. How to buy paper wisely. How important it is to fit paper more properly to the job. How to get the most out of the paper he buys. This knowledge, emphasized in wartime, is going to be valuable to him and to the industry in peacetime too!

All told there is lots of light in the view ahead. International Paper Company, 220 East 42nd Street, New York 17, N. Y.



Asked the President of the Purchasing Agent:

Did you say that war restrictions have IMPROVED the serviceability of the paper we use?

Said the Purchasing Agent to the President:

Right. War restrictions IMPROVED the performance of the stationery and record-keeping papers we use.



"WAR made paper scarce. It became necessary to get more sheets per pound. Stationery and record-keeping papers had to be thinner. To get sufficient strength and wear from thinner papers we bought paper of greater cotton content. These papers proved stronger and more serviceable than papers made all of wood pulp. There's less waste because cotton fiber papers stand more erasing. These papers

look better, take more use and abuse, and last longer."

When war restrictions go, don't return to the wasteful practices of yesteryear. When you order stationery and record-keeping papers, specify PARSONS. You'll get the finest cotton fiber papers from a mill that specializes in paper for modern business, made to reflect and record the *quality* of your organization.



PARSONS PAPER COMPANY • HOLYOKE, MASSACHUSETTS



Please

YOUR Customers

Tell this fact to buyers of paper: for stationery and records, war restrictions *improved* the performance of paper where a higher cotton content was used. And paper giving better performance to users holds more satisfied customers.

Our advertising tells buyers and users of paper this important fact. This message appears in Nation's Business, Business Week, Burroughs Clearing House, Dun's Review, Banking, Journal of Accountancy, and The Controller — magazines read by *over seven hundred thousand* of the best prospects for quality paper in business.

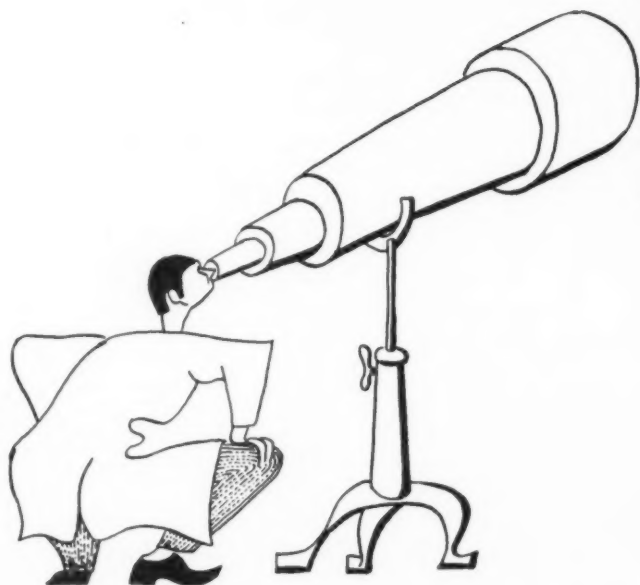
Please your customers with the performance, the feel, and the looks of the paper you sell and they use. Do it by recommending PARSONS cotton fiber papers for stationery and records. In PARSONS *complete* line of ledgers, bonds, indexes and bristols you'll find everything you need from 25% cotton to the finest linen and all-new-white-rag papers. Only *new* rags are used at PARSONS and greater care through the entire manufacturing process insures uniformity throughout each run, and that every run of the same brand is alike.



MODERN LITHOGRAPHY

FARSIGHTED?

We are all looking toward the day of VICTORY; alert printers and lithographers are looking beyond that day. RUTHERFORD's research engineers are making sure that those in the industry who have been farsighted in planning for postwar business will be in a position to meet keen competition. You will be able to operate in high gear in tomorrow's peacetime lithographic production if you have efficient and up-to-the-minute RUTHERFORD equipment. To avoid future disappointment we strongly recommend that you let us know your requirements now. Drop us a line if you would like to talk things over with a RUTHERFORD representative.



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100 SIXTH AVENUE • NEW YORK 13, N. Y.

CANCER

KILLS 1 ADULT OUT OF 6

IT MAY WELL KILL YOU!

GIVE!

GRIM FACTS: Yes, 1 out of 6 who read this page may die of cancer unless more money is given to wipe out this scourge.

The present one million dollars that Americans are giving is not nearly enough. Eminent scientists lack funds for experiment . . . cancer clinics are starved for equipment . . . sufficient money to care for pitiful advanced cases is not available.

Nearly every American family is destined to number a cancer victim with all the misery and expense involved . . . 17 million living Americans are now doomed to die of cancer!

Yet Americans give to the conquering of cancer less than one million dollars annually, as compared to one hundred billion dollars a year to the war. *More must be done!*

**Be as Generous as you can in
this Life and Death matter.**

CONTRIBUTIONS ARE DEDUCTIBLE FROM INCOME TAX

**YOUR GIFT MAY SAVE
YOUR LIFE AND THE LIVES OF
THOSE YOU LOVE**

GREAT HOPE: You, by giving, can save perhaps yourself, perhaps a dear one, from cancer.

Leading cancer scientists say that five million dollars a year would cut the cancer death rate $\frac{1}{3}$ to $\frac{1}{2}$. And this even if not another fact were discovered . . . merely through wider education, more clinics.

Science wiped out yellow fever, solved small-pox, typhoid, diphtheria, found sulfa, penicillin. With funds, science can also find the answer to cancer for us all.

Do your part! Give, and give again to banish the dread curse of cancer, to save lives by treating cases in time. Send us any amount from 10¢ to \$1,000. Every bit helps!

*If you are a resident of the Metropolitan area
of New York, send your contribution to*

NEW YORK CITY CANCER COMMITTEE
130 East 66th Street, New York 21, N. Y.

AMERICAN CANCER SOCIETY
350 Fifth Avenue
New York 1, N. Y.

I enclose my contribution of \$ _____
to aid in the War Against Cancer.

NAME _____

STREET ADDRESS _____

CITY _____ STATE _____

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How you love to take a nap.
Slumber deep, and peaceful too,
Pleasant dreams, we envy you.*



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For a bond paper with plenty of snap and crackle . . . and all the uniformity and printability that you and your customers want . . . specify Atlantic Bond.

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 A complete line of dependable, standardized business papers

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Von Olker-Snell Paper Co.
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 Fort Wayne.....The Millcraft Paper Co.
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MacCollum Paper Company
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 Milwaukee.....Wisconsin Paper & Products Co.
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 New Haven...Whitney-Anderson Paper Co.
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A. W. Pohlman Paper Co.
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 Tallahassee.....Capital Paper Co.
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 Toledo.....The Millcraft Paper Co.
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 Waco, Texas.....Olmsted-Kirk Company
 Washington, D. C.....Virginia Paper Company
 Wichita.....Southwest Paper Co.
 Worcester.....Butler-Dearden Paper Service
 York, Pa.....The Mudge Paper Co.

Monterrey, N. L., Mexico.....Carpenter Paper Co.

★ ★ ★

MANIFEST BOND ONLY is also sold in New York City by
 Henry Lindenmeyr & Sons, Merriam Paper Co. and George
 W. Millar & Co., Inc.

HOW'S BUSINESS?

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We're doing our level best to continue meeting all requirements so that everyone can have the same plate-making service enjoyed by more than 150 of America's leading lithographers.

Without our fine staff of over a hundred master craftsmen, the best equipped commercial plate-making plant, operating 24 hours a day, this service would be impossible.

Despite a deluge of business at a time of many wartime restrictions we have been able to continue producing quality work in the shortest possible time. True, all new work cannot be designated as "rush", for our long list of old customers do have priority on this service.

Write, wire or phone your requirements on color process plates, black and whites, highlights, originals for hand transfer, crayon color plates, poster, line or halftone negatives or positives for machine transfer, or photo-composed press plates, albumen or deep etch.

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TRADE PRACTICES

THE above pages from The Lithographer's Manual deal with only two of the many problems which arise from time to time regarding trade practices in the lithographic industry. The National Association of Photo-Lithographers has adopted and confirmed in each annual convention trade practices which many lithographers carry on the back of their quotation forms. This association also accumulates and makes available for its members court cases between lithographers and customers involving trade practices. The NAPL trade code has served as evidence in court on occasion and its usage and acceptance by the industry has rendered it authoritative. A reference to this code often makes it possible to settle a case without going to court.

This is only one phase of the activities of the Na-

tional Association of Photo-Lithographers. Some of the other activities and services are mentioned in the accompanying listing, and many other services consist of counsel to individual member companies where advice or information is needed. The information in the NAPL files is too extensive to be effectively collected and compiled by any one firm, but member firms, banding together have made it possible to accumulate a treasury of material which may be drawn on by member companies.

Member companies' dues are determined by the number of presses operated, so that fees are at all times in proportion to the size of the company. If you would like to know more about NAPL membership, without obligation, send in the coupon below.

OTHER NAPL SERVICES

Confidential Bulletin
Lithographic Wage Data
Lithographic Cost System
Hourly Costs on Equipment

Governmental Regulations
Data on New Supplies and Equipment
Annual Meetings

Walter E. Soderstrom, Executive Secretary

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS
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We would like to know more about your Association. Our press equipment is as follows:

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On paper, cardboard, metal, fabrics — in fact on every surface that will take printing by offset, letterpress or gravure — S. & V. Inks have found their way to every battlefield, to every war plant, and into every home in the land with some message of vital importance.

We are proud of the part that Sinclair and Valentine Products have played in the stupendous war job of blanketing the earth with the printed word.

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Wastepaper is vital to victory! Yet the pulp and paper situation is more critical today than ever. So alarmingly critical that it is nothing short of sabotage to destroy even one pound of wastepaper that is fit to reclaim. The armed services need more and more paper products, and our civilian needs go on apace. It's a patriotic duty to save every bit of wastepaper and make sure it is turned in. In your advertising, too, you can help greatly by urging every reader and listener to do likewise. Save wastepaper now and save lives!



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LITHOGRAPHY IN VICTORY

IF YOU took all the issues of all the lithographic and other graphic arts magazines from January 1942 to the present, and bound them together, you would have between the covers a disconnected and totally unwieldy record of the lithographic industry in the war.

Believing that such a record should be easily available and readily accessible to our industry both for now and in future years, we have devoted this issue to such a recording of the war years. It is a record which should be told, but at the same time it is so broad, so kaleidoscopic, that it defies a complete and detailed report within these pages.

There is part of Lithography's war record which cannot yet be told. For instance, many lithographers know something of the tremendous military lithographic jobs which have been done and are being done at such places as St. Louis and Dayton, to name but two. Army, Navy, Air Forces, Government Printing Office, Office of War Information and other government users and producers of lithography have not compiled figures which give a complete picture of the role of lithography in their operations. There can never be a complete compilation of such information.

Though incomplete, the record is impressive. Like other American industries, Lithography has risen to its war job in a manner deemed impossible by normal standards of operation. The industry has had no over-all exemption from Selective Service, nor has it asked for such exemption. Deferments have come only on the basis of the essentiality of work done in an individual plant. Manpower, therefore, has been and still is, a prime problem in lithographic operations. Just any man won't do, skilled craftsmen are needed. To help meet this need the industry has set up its own training system without outside impetus. New equipment has been unobtainable since the beginning of the war except in rare instances. Prewar facilities have had to meet the expanded demands of war. Paper and other shortages and restrictions have been a plague.

But the war job is being done.

In pausing to review the record on V-E Day, we aren't under any false assumptions that the war is over. Nor are we seeking to brag about the Lithographic industry. But the industry which is "the art preservative of all arts" certainly should have its own record preserved in permanent form. And we have tried to present an objective report, as complete as possible.

The result may be a magazine which you will want to keep as a record of your industry at war. We hope it is.

A RECORD OF OUR INDUSTRY IN WORLD WAR II

MAY, 1945

31

Consider War Conversion for Printing & Lithograph Plants Changing Plant Methods

Give War Production Awards for GPO Work

Crowds Seek Overseas Editions
Patrons were required to control the crowds seeking free copies of the magazine "Integrated Servicemen" Edition of the New York Daily Mirror.

Boston Lithographer Prints "Invasion Currency"
The weekly "Invasion Currency" is printed by the E. S. Allen Litho Co. in Boston. It is a weekly publication, and with all production normally taken by the Lithographer's Union, it is a weekly publication of the Lithographer's Union.



THE OUTDOOR ADVERTISING INDUSTRY JOINS THE U.S. TREASURY IN URGING YOU TO BUY AN EXTRA WAR BOND

Declare Military Map and Manual Production Essential

Order 10% Cut in Use of Printing and Book Paper

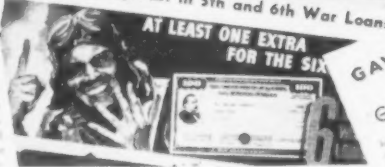
War Manpower Commission's action will try commercial lithographers

Litho Employees Raise \$42,000 Cash for Bonds

Posters Play Big Part in 5th and 6th War Loans

Invasion Increases Demand for Maps

Philadelphia Group Launches Rehabilitation Plan



GAVC Completes Guide for Wartime Printing



Kaiser Shipyard Offset Magazine Sets Records

GAVC to Have Official Status With

Lithography Meets Its War Challenge

BY EDWARD D. MORRIS

Lithographers National Association

THE kind of war the United States has been fighting for the past three and one half years bears little resemblance to World War I with its fixed battle lines and with the actual fighting largely confined to the European continent and the Atlantic Ocean. The war we are now fighting is a new and different kind of war—a war of movement and maneuver, world-wide in scope and requiring incomprehensible quantities of many different kinds of specialized war materials and equipment. It has also required the recruiting, training and equipping of a body of service forces that number millions more than we have ever before had under arms. It has been necessary to transport these forces, a large percentage of which have had to have highly specialized training, fully equipped and prepared to fight a fast moving war of movement on many different battlefronts scattered all over the globe and to keep these forces continuously supplied.

American industry's job, mainly that of supplying the tools of war, not only for our own forces but to a large extent for those of our Allies, as well as providing essential civilian

products in sufficient quantity to keep an expanded civilian economy on an even keel, has grown with each extension of our battlefronts. In addition to the purely military problems of strategy, etc., each new front has presented our high command with new problems in training of personnel, equipment and transportation which, in turn, have been reflected back to industry in urgent demands for new and increased production. The success of our forces on each of these new fronts has been dependent upon not only the solution of these purely military problems but also upon the manner in which industry has been willing and able to meet what, in many cases, would previously have been regarded as impossible production demands. The fact that organized resistance in Germany has now finally ended, and that our forces are rapidly closing in upon Tokyo, testifies to the manner in which these demands have been met.

Early in the war the decision was made to look to the lithographic in-

dustry to supply war requirements. This, together with the fact that the speed and versatility of the lithographic process have rendered it especially valuable in meeting the varied and urgent needs of wartime production has placed upon lithographers the obligation to take over more than a full share of responsibility for the success of our American War Program. While there may be some individual companies which have not risen to this responsibility the industry as a whole has done so and is doing a war job of which we can all rightfully be proud.

Information in our office indicates that several companies are devoting as high as 90 per cent of their capacity to the production of lithographic material that is directly essential to the prosecution of the war, and that there are many companies in the bracket between 60 and 90 per cent. This is really a remarkable record particularly since it must be remembered that the lithographic industry, unlike many other industries, cannot be converted to 100 per cent direct war production if our civilian economy is to continue to operate—and the industry's contribution to-

Hear GPO Plans to
Warehousee
Manufacture of Printing Machinery
ster Paym
els Face Further Cut
Order
Curtails
Film
VPB Cuts Greeting Cards
to 40 Per Cent E-
Material Sparks Red Cross Drive
Publication of Litho Processes to
WAR WORK
Printers and Buyers Move to Conserve Paper

ward the efficient functioning of our civilian economy is of as equal importance to the war effort as the production of direct war material.

THE whole story of commercial lithography's part in this war cannot be attempted here. Even if space permitted, much of this story could not be told for reasons of security. Lithographers are daily running many jobs in the "secret" and "restricted" classifications and whole programs are being carried out, in which lithographers are taking an active part, which cannot be discussed at this time. However, one of the industry's outstanding jobs which we believe is representative of the way in which it is carrying out its complete war job, has been done in connection with the production of Army, Navy and Air Corps charts and maps. Other jobs, which may be either more or less closely connected with the actual fighting fronts, and which may be larger or smaller with respect to the tonnage of paper processed, are not less important and lithographers participating in them have been faced with similar problems.

A major part of the map program has continuously been carried out by lithographers many of whom were faced for the first time with the prob-

lems involved in the production of multi-color maps, since in peacetime this type of material had been produced in comparatively few plants which specialized in map work. Early in the program fluorescent inks and later fluorescent papers were developed to such an extent that they could be used for military purposes. New techniques for handling these materials in production quickly followed and our air forces soon benefited from less obstruction to night vision, and the possibility of blacked-out planes being detected over hostile territory through the escape of light previously necessary for reading charts was entirely eliminated. Other improvements are taking place and the lithographic industry is now being continuously called upon to produce many special purpose maps and charts on new types of paper and on cloth.

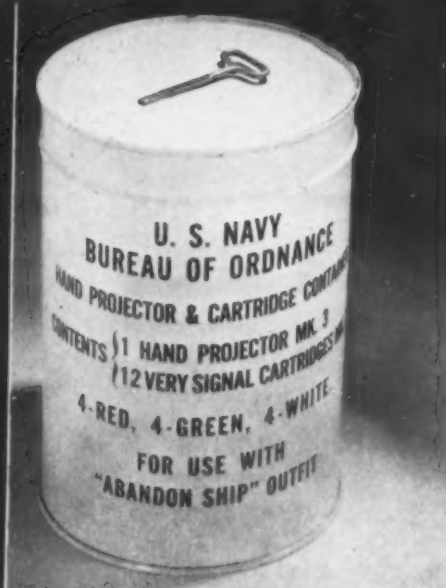
Some appreciation of the magnitude of this job, which is also indicative of the expanded demands upon the industry from other sections of the war program, can be gained by some comparisons with World War I. It has been estimated that the total map requirements for that war did not exceed 35 million copies, and most of those were produced in France. In the present war, approximately seventy million copies of over three thousand different maps were required for mapping the surface of Western and Southern Europe alone which, of course, is only a very small part of the territory over which our forces will fight or have already fought. Our greatly expanded air forces have also required millions of copies of aeronautical charts. The expansion of our Navy and Merchant Marine has created additional demands. When consideration is given to the fact that our ships, both naval vessels and merchant vessels, need an initial supply of from five to ten thousand navigational charts each, the increased demand from this source can readily be appreciated. In terms of press impressions the numbers become astronomical inasmuch as most of these maps and charts require from five to ten or more printings.

Maps and charts as well as similar operational material which is closely connected with the actual progress of our military campaigns are by their very nature subject to urgent and unexpected production and delivery requirements. The lithographic industry has, on numerous occasions, been called upon to meet such unusual demands which in many instances have required the close cooperation of a number of individual plants. To cite an example, one such instance occurred during the period in the war when German submarines were active and a vessel carrying vitally needed maps was torpedoed and sunk. Several lithographic plants turned over their entire facilities for the replacement of this shipment in order that it might be delivered in time so that an important planned military operation could proceed without delay. There have been many such instances in this and other programs.

The industry's direct war job, is, of course, a much broader job than that of supplying the maps, charts, bombing tables and other such lithographic products that are used on the actual fighting fronts. In addition to supplying the new and increased lithographic requirements of prime contractors, the industry has implemented our Army and Navy Personnel Training Programs with instructional manuals, posters and charts, mock ups, cut-a-way diagrams in color and other like material for visual training aids that have enabled our military personnel to become a force of specialists. Lithographers also produce the invasion currency that these forces carry with them into liberated and invaded enemy territories.

Further, individual lithographers have made highly specialized individual contributions to the war program beyond what might be called the industry's direct war job. One such lithographer, by an adaptation of the lithographic process, is largely responsible for the breaking of a very serious bottleneck which occurred in the production of blueprints, and another has devoted al-

(Continued on Page 99)



Decorated Metal Products Serve on All War Fronts



METAL containers, and other lithographed metal products, have played a role in the war which in prewar days would have been called a fantastic impossibility. This role has been so broad and so diversified that it defies any complete delineation, but even a partial account of metal decorating at war reveals an outstanding record.

This record is not only concerned with the products used in the war, but also with the outstanding research and engineering behind these products. It is all the more impressive because it was attained in the face of unprecedented shortages of materials and labor.

Many of the container, cap and closure producing firms have continued to manufacture the same general type of product for war use that they produced for peacetime, while others, which normally manufactured such peacetime products as lithographed toys, games or advertising signs, have converted their produc-

are on every battlefield doing a war job not only as containers of food, medicines and munitions, but as weapons as well. Cans are in active combat duty as grenades, gas mask filters, lifeboat emergency signals, projectiles, and a host of other uses.

More than a year ago the Army Quartermaster Corps announced that all paper labels had been eliminated from cans of food and that labels lithographed directly on the metal were required in order to avoid loss of identification in transit, in the rough handling which is often necessary, or in landing operations where cans are often submerged in salt water.

Coatings of olive drab are also common on containers, a lesson soon learned when bright shiny cans were quickly spotted as targets by enemy aircraft.

This olive drab coating has been developed as a translucent or semi-opaque material. Black identification labeling is lithographed directly on the sheet and this camouflage coating

screwed a hose attached to a small balloon. When the can is submerged in sea water the hydrogen is generated, the balloon fills and soars 300 feet into the air, carrying aloft a radio aerial which enables an SOS message to be sent from a tiny portable radio.

A smoke flare can is filled with a chemical that sends a column of deep rose colored smoke spiralling into the air—all with the pulling of a ring lodged under the lid of the can. The smoke signal can be seen by a ship five miles away or by a plane 18,000 feet in the air.

A fishing kit can holds hooks, lures, lines, jigs, spear and gaffs to catch fish to supplement emergency rations. Strong cords to attach the equipment to the raft are provided, and knives, gaffs and spear have wood handles for buoyancy. Complete instructions are printed on waterproof paper.

A blanket can contains three army blankets and then serves as a rain water catcher or a storing place for the fish to be caught . . . life-saving equipment in winter.

A still to convert salt water into drinking water weighs only four pounds for a three man raft and eight pounds for a seven man raft. With each still are cans of solid safety fuel which supply the necessary heat to distill sea water for drinking.

Massage oil for protection against dangerous sunburn, windburn and salt spray is contained in a special can which is part of emergency equipment. Enough canned food to last 10 men for three days is packed in a jug-size vacuum container.

A provision "bomb" is designed to be dropped to survivors at sea. It is a large container with a concrete nose which breaks off as it hits the water and the container floats like a buoy. A thick layer of cork or sponge rubber between the nose and the reinforced bottom of the can absorbs the impact. The "bomb" can be dropped from a regular bomb rack of a plane and can thus be aimed to fall within 10 feet of a lifeboat or raft. The "bomb" contains seven cans of drinking water,

Everything from food, plasma and smoke cans to naval torpedoes is rolling off the production lines of metal decorating companies

Photographs Courtesy Can Manufacturers' Institute

tion to such strictly wartime products as antitank mines and instrument panels. Container manufacturers with large fabricating facilities have gone as far afield as naval torpedoes, and fighting equipment for planes, tanks, ships, and guns.

Lithography on metal sheets to be used as templates in the manufacture of aircraft, ships, automotive equipment and other war material has been a major contribution which this process has made to the war. Through the use of lithographic processes, the production of these templates has been greatly simplified, an important reason why production of war equipment has reached such heights.

Containers by the millions are rolling off the production lines daily and

is applied over it, with the result that the black label is easily read through the coating.

CANS to save lives as well as containers for weapons, form an important part of the picture. Among these are:

A sea marker container, filled with fluorescent paint. The contents are dumped into the water by downed pilots, or men adrift. Immediately a giant splotch of color, yellowish green in the daytime and shining brightly at night, spreads out across the water—a marker for searching planes.

A balloon SOS can is filled with chemicals that generate hydrogen. In to the hole at the top of the can is

cans of concentrated food rations, cigarettes and matches.

ALSO in the field of containers are many that aid directly as fighting tools. For instance:

Colored signal smoke cans are filled with brilliant smoke signals in red, orange, yellow, green, and violet in addition to black and white. By pulling a pin the smoke is released and billows forth for about three minutes, setting up for a tank (or other ground outfit) an unmistakable identification for airmen who can easily distinguish colors from altitudes up to two miles. Similar containers equipped with small parachutes are dropped from observation planes to mark enemy targets for bombing planes or artillery. Colors and combinations of colors are changed from day to day to indicate different things.

Big aerial bombs depend on airtight cans to keep their fuses clean and moisture-free. These cans are opened and the fuses attached just before the raid.

A parachute bomb is filled with TNT to which is attached a container holding a parachute which opens as the bomb and can are dropped, automatically pulling a wire which sets a fuse. The instant the bomb hits it explodes. With this canned parachute a plane can fly very low among enemy forces, drop its load and get away before the explosion.

The canister is military lingo for a can filled with steel balls. It is fired from a 37 mm tank gun and explodes in mid air 30 yards away, scattering the steel slugs.

A hermetically sealed cartridge case liner is a can used to protect machine gun bullets from rough handling, dirt and moisture. This can has a grooved top which can be quickly ripped open by hand.

Portable TNT in a demolition kit for engineers is a unit of 18 small cans of explosive and a variety of fuse equipment.

One of the strangest containers is a "canned motorcycle." For paratroopers, small, folding, gasoline-driven scooters, packed complete in a

can, are dropped with light parachutes from planes. The can is opened, and the motorcycle assembled in only a few minutes.

The list could go on and on, as cans are in use for powder, shells, torpedoes, anti-aircraft gun parts, base plates for shells, blasting caps, cartridge clips and links, firing pin supports, levers for incendiary grenades, liners for various kinds of ammunition, starter cartridges for mortars, parts for fibre shell cases, incendiary grenades, battery cell parts, Signal Corps talk-back cases, flashlight parts, radio coil sheets and parts, gun oil, rifle cleaner, filters for gas masks, canisters for gas masks, gaskets and coils for motors, etc.

TO get some idea of the immensity of the container manufacturing industry, it might be mentioned that in 1940, the last normal prewar year, the industry made 20 billion, 720 million cans, using over two million tons of steel; 77 million pounds of tin; a large tonnage of lead for solder and terne plate; a million gallons of lacquer, excluding decorative coatings, inks and varnishes; about three million gallons of colored coatings and finishing varnishes; several million pounds of ink; large quantities of natural rubber, and other rubber chemicals, solvents, reducers and lubricants. About 40 per cent of the cans had a decorated exterior for the multiple purpose of advertising, attractiveness and protection against corrosion. Another 40 per cent re-

quired the application of an interior organic protective coating.

These figures do not cover many other metal decorating companies who specialize in products other than containers.

Much of the material used in producing these metal decorated products came from the Far East, and the supply was of course shut off early in the war. Notable among these materials was tin. These conservation measures then faced metal decorators and fabricators:

Use other metals in place of tin plate;

Use steel plate with no tin coating;

Use less tin coating on tin plate;

Use low-tin or tinless solders;

Use low-rubber or rubberless can seaming compounds;

Use domestic drying oils and resins for can enamels; and

Use substitute non-metallic cans for non-essential products.

War Production Board restrictions on the use of metal cans for a long list of products dealt a terrific blow to the business of lithographing containers. Many products went into glass and paper containers, and many can companies spearheaded the development of all-paper containers and paper containers with black plate ends made from steel mill rejects or scraps of plate from other can making operations.

Meanwhile the stockpile of tin, which had to be stretched to last over a period of five years was allotted sparingly.

Intense cooperative research among can companies and suppliers produced the following results:

The development and production of millions of base boxes of a Bond-ized steel plate requiring no tin, which after lacquering both sides, could be used for ends of cans for processed, non-acid vegetables, meat, fish and dairy products, and for non-soldered cans for non-processed food and non food products;

The development and production of millions of base boxes of tin plate with only one-half pound of tin per base box by a new high speed electro-

(Continued on Page 105)

Modern Lithography thanks the following individuals and organizations for the information they furnished for the preparation of this article:

The Can Manufacturers' Institute and the booklet "Cans in Wartime."

Mr. C. E. Maier, Dir. of Container Research, Continental Can Company

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Mr. Herbert J. Wolfe, Vice-President Kienle & Company

Mr. George Carnegie R. Hoe & Company

Ault & Wiborg Div. Interchemical Corp.

GPO Spearheads Vast War Programs

"DO NOT believe that there is serious doubt anywhere that printing is a vitally important part of our job of fighting." So stated Public Printer A. E. Giegengack, head of the Government Printing Office, in a recent address in Washington, and he added that printing in this war is playing many new roles, doing jobs it has never been asked to do before.

The war job that has been done and is being done by the GPO is tremendous. A recent report showed its normal peacetime volume to be \$18,000,000, and in the first year of war, even with civilian functions curtailed, the volume of needed printing doubled and then tripled. Last year the volume exceeded \$70,000,000, and the Public Printer has said that indications are that the volume this year will surpass this figure.

Wartime expansion of the GPO has been not so much in the direction of more equipment at Washington as toward decentralization of paper distribution and handling of details with commercial contractors through warehouses and branches established at New York, Chicago, San Francisco, Dallas, Atlanta, Philadelphia and St. Louis.

This decentralization provided access to the principal lithographic and printing centers in the country, which, coupled with the huge production capacity of the GPO plant in Washington, paralleled, in a national sense, the global planning of military activities, Mr. Giegengack says.

An idea of the size of the job now being handled through the GPO is

shown by the fact that there is an average of 5,400 separate publications a month, reaching a total of 36,000,000 copies and requiring more than 40,000,000 sheets of 38 x 48" paper.

Taken as a separate classification, the production of field and technical manuals is probably most typical of the GPO work. The technical nature of the training required in this war has made it necessary to print more manuals for the Army and Navy than in all the previous wars in our history. The field manual has been prepared and printed so that the soldier can have up-to-date information—the latest research developments — on any activity in which he may become engaged. They include, for example, such subjects as sanitation and first aid, unarmed defense, or

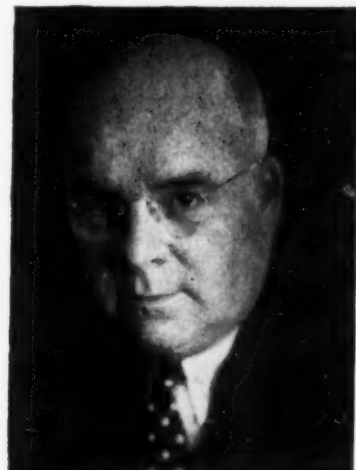
booby traps and antipersonnel mines. There is a manual for every type of ordnance, dealing with its maintenance and operation; also on enemy armies, camouflage, telegraph construction, and others too numerous to mention.

In a war like this one, which makes use of countless scientific and engineering developments, the Army needs a thousand and one different field and technical manuals. As soon as something new is developed, the GPO is called upon to print a textbook which will tell officers and soldiers the whole story.

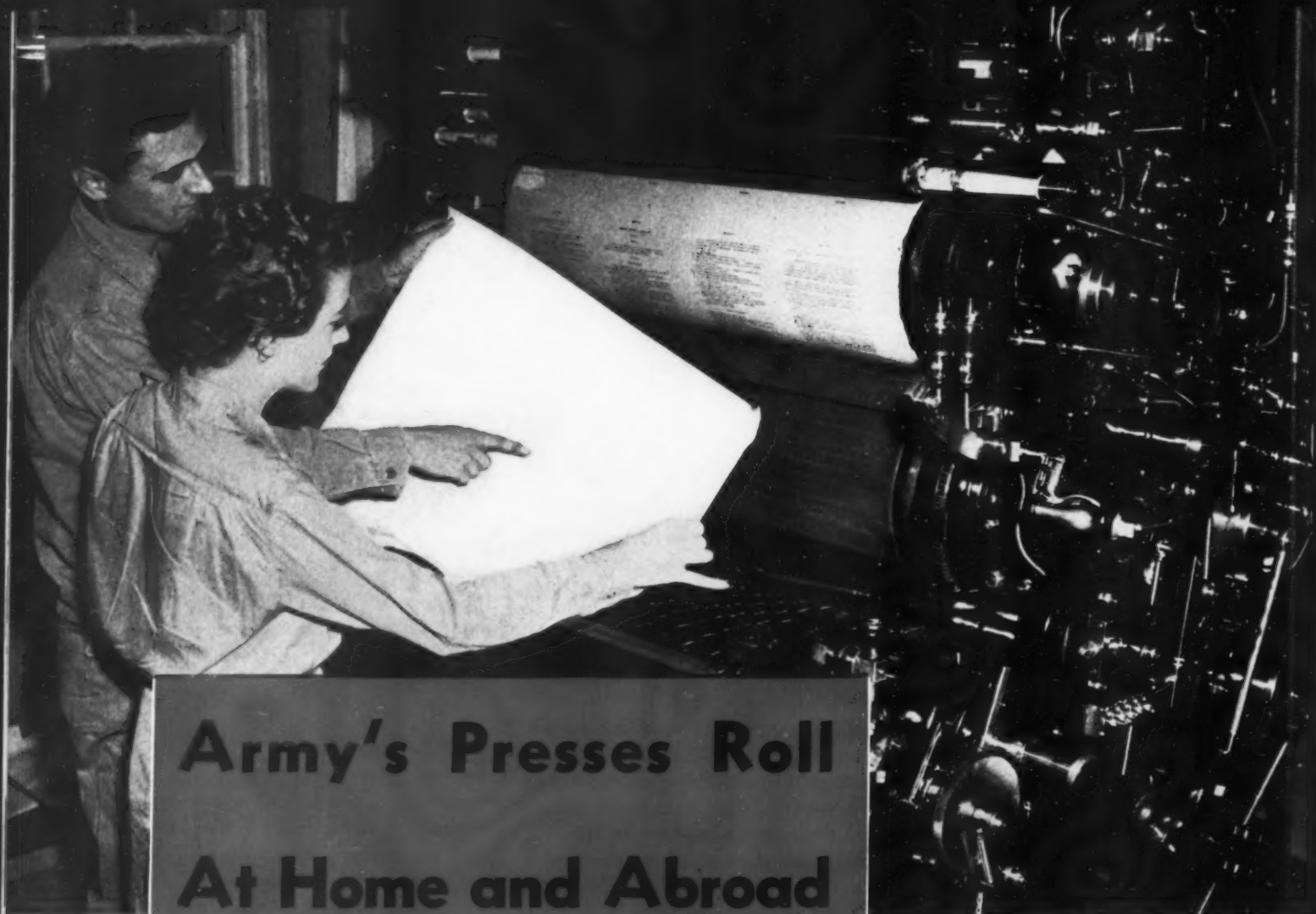
Much of this type of work lends itself to lithographic production, and many lithographers have produced large volumes of it through their contracts with the GPO.

LITHOGRAPHY has fit into the vast government war program because it is the logical economical method for doing many of the jobs, such as manuals, large colored posters, and charts. It is the method the Army turns to for its maps, the Navy for its charts. Many publications using color can best be produced by lithography, and many classes of one color printing and reprinting lend themselves to efficient offset reproduction. Therefore the GPO, which utilizes the particular method of reproduction which suits the job, has

(Continued on Page 105)



This award has recently been inaugurated by the GPO to recognize the achievements in war production of lithographers, printers and suppliers. The first six awards were made during April. (Story page 75.) Right—A. E. Giegengack, Public Printer of the United States, has supervised the operation of the huge Government Printing Office through the war years.



Army's Presses Roll At Home and Abroad

LITHOGRAPHY has played an important role in the vast operations which have carried the United States Army to victory in Europe. While a great deal of the lithographic work for the army has been produced on contract by commercial lithographers in many parts of the country, the army itself has also entered into lithographic operations in a big way.

On these pages are a few scenes from various army installations engaged in lithography for various types of production.

Probably best known among army operations is Army Map Service in Washington, with its modern lithographic plant engaged in the production of large quantities of military maps. (ML, Feb., 1943; June, 1943; July, 1943; June, 1944; Jan., 1945.) This plant reported early in the war to have some 3,000 employees in compilation, production and distribution, received the Army-Navy E

award for war production, and in turn has awarded citations to several lithographing firms for their map production contracts.

An army operation which has captured the imagination of commercial lithographers is the mobile reproduction train. (ML—May, 1943.) These mobile units are complete lithographic plants on wheels—groups of trucks and trailers which travel with the army and produce, on the spot, whatever lithographed material is

necessary, from maps to military orders. A typical unit as described by the Corps of Engineers is valued at \$2,000,000 and comprises three 20 ton trailers and four two-and-a-half ton vans. Designed for simple and fast mobility these trains can go over rough terrain and operate just behind the front lines. From aerial reconnaissance photographs lithographed mosaic maps and bombing charts are produced, as well as navigation charts, information bulletins

Top of page: This army offset press is at Camp Davis, N. C. Sgt. Max Simons shows WAC Pvt. Jessie Kent a press sheet. (Photo by Sgt. Robert Tracy, U. S. Army Signal Corps.)

Scene at right is in Army Map Service, Washington, D. C.



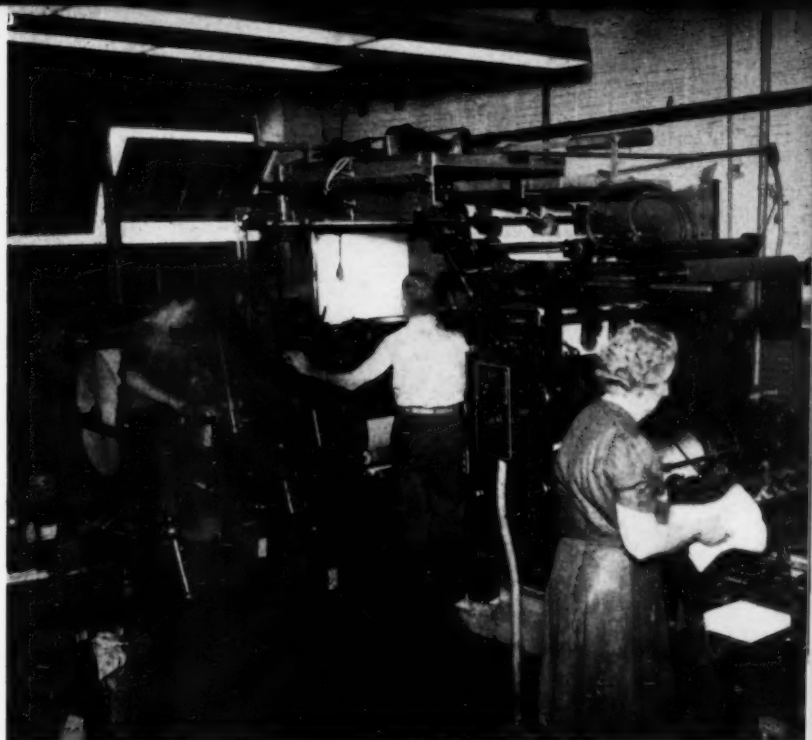
and other communication needs of an army. These units carry complete lithographic equipment — cameras, platemaking, compact offset presses, and regaining machines. They carry their own power plant, water system, firefighting equipment, armament, and intercommunication system. The army has never revealed how many of these trains are in operation.

At Fort Belvoir, Va., a great deal of lithographic activity has been going on since the beginning of the war in connection with the Engineer Reproduction School and the publication of military newspapers and periodicals. In other forts and camps scattered across the nation offset presses have been turning out many types of lithographed material needed by the army to keep its gigantic machine moving.

Raritan Arsenal in New Jersey is another army center which accounts for a large volume of lithography, part of which is produced in its own Publication Division plant and the balance by commercial lithographers on contract. (ML Nov., 1943.) Production figures running into several million per month of instructional manuals and similar material is centered around four 22 x 29 inch offset presses, a 35 x 45 inch, and a high speed web offset press which lithographs two sides of the web in one operation. Most of these presses operate 24 hours a day.

There are many other lithographic plants operated by the U. S. Army — in camps, in forts, bases, centers, in Washington, on the West Coast, in England, in Panama and even on tiny Saipan Island in the Pacific. (See page 58.) ★★

This web offset press runs 24 hours a day turning out instruction manuals and other material at the army's Raritan Arsenal plant in N. J.



Right: A platemaking scene from the Map Reproduction School, Fort Belvoir, Va., which has been a center of army lithographic activity.



Bottom, left: Another scene from Army Map Service.

Bottom, right: The interior of one of the trailer units which make up the famous Mobile Reproduction Trains which are complete lithographic plants on wheels.



V-E DAY MAY BRING MANY

BY

WALTER SODERSTROM Secy., Natl. Assn. of Photo-Lithographers

CONCURRENT with the United States becoming an active participant in the world conflict, the lithographic industry literally went to war producing huge quantities of military maps, charts, instruction manuals, and secret and confidential military material for the Federal Government. This industry was pressed to produce this material for several practical reasons: the many processes involved are largely centralized under one roof, fast presses being used, and deliveries can usually be made in the quickest time.

The war has been responsible for a tremendous increase in production and output. As a result, our industry, it has been estimated, has increased its volume by approximately fifty per cent in 1943 and 1944 over the two previous years. Neither men nor equipment have been spared in meeting the ever-increasing demands despite labor shortages. Because of the shortage of help and the heavy demand for maximum productivity, excessive amounts of overtime have been inevitable. The "take-home-pay" has consequently been very high.

The Year Ahead

What is going to happen to lithographic productivity in the year ahead of us? The industry's volume during 1944 was estimated at \$300,000,000. When the war broke out, lithographers were extremely worried upon losing many of their good customers. Soon thereafter, however, when the Armed Forces recognized

the great advantages inherent in the lithographic process, they immediately put it to work to such an extent that the industry's sales volume climbed higher than ever before in its history.

Many buyers in manufacturing and commercial organizations have utilized the lithographic process to good advantage during this war period. In addition, thousands of men in the Armed Forces have acquired a practical knowledge of the process. Will this have a favorable effect on the industry during the transition period?

Transition Problems

It would therefore seem that when lithographers come to the end of producing for the Armed Forces, they will have a 30- to 60-day period of transition from war work to normal business. Every lithographer should recognize the fact that this short time is important, for both he and his competitors will ponder the question, *Where am I to get the volume to keep the productivity I had prior to VE Day?* Sound business judgment would dictate that continued volume will not be achieved by means of price cutting, but rather by sound constructive sales planning. Making a profit on every job taken into a lithographic plant should be the inflexible purpose during this transition period. By all means, we must avoid a price war which certainly would have disastrous results.

Our new economy after readjustment will require all of the production facilities of the industry for an

unlimited period. Many industrial concerns and advertising agencies already have sales plans drawn up to break in advance of their ability to deliver merchandise. Lithographic output should at least continue its 1944 volume, and after new equipment is available a steady upward growth is a reasonable certainty.

New Competition Ahead

This industry is vigorous enough to absorb new competition which will have to be met when new machinery is available. A considerable portion of this new competition will come from small presses installed by letter shops and printing plants. However, there is little to fear from this new competition until at least one year after VE Day. Manufacturing new lithographic equipment takes time, and complete installations sold during the early period will not reach existing plants until at least two years after VE Day.

Lithographers who have been using their equipment continuously during the last two or three years will have to replace and add to it. Although small plants may install an additional press or two, those in the medium class will add larger presses and possibly color presses, and larger plants will no doubt modernize with the best equipment available. Despite some of the problems which will have to be solved, one thing is quite obvious: Thinking lithographers will definitely move ahead with the time.

"G.I." Money for Small Plants

Some of the men now in the Armed

LITHO TRANSITION PROBLEMS

The Outlook for Men, Equipment and Business

Forces who have had offset experience will want to use their "G.I." money for the purchase of small lithographic plants. The Government, we may assume, intends to encourage heavy industry to full production, and will provide the impetus for manufacturers to turn out larger job quantities than heretofore. Installment buying and liberal credit terms will be two powerful factors in meeting the unemployment threat.

Because the selling of equipment to newcomers for the post-war period will be comparatively easy, manufacturers should take advantage of this great opportunity. How sound they build their future business will depend on the policies they lay down, and how they follow through in their trade practices on the terms and conditions of sales to new buyers.

Newcomers to any industry—and this applies especially to ours—should have some knowledge of the business, reasonably adequate funds for capital investment, and enough working capital to carry them over the first year. An equipment-producing industry is no sounder than the industry to which it sells. Attempts to restrict competition should be avoided as much as possible, but when advice and counsel are sought by those who are planning to come into this industry, they should be given generously, and with the purpose of preventing serious blunders. This responsibility rests squarely on the shoulders of those who sell and service the industry.

Manpower Requirements

Competent lithographic craftsmen have always been extremely scarce. This condition has been largely aggravated because lithographers have had neither the time nor the desire to train new men. Some men have been trained, it is true. This, however had been accomplished by a few plants who have had to carry the entire load in this respect. If this condition persists, it is difficult to see from where the newcomer in this industry will obtain his help. To date, the total number of lithographic craftsmen has been estimated at 25,000. This available supply of manpower is spread all over the country, with much of it, of course, concentrated in the larger lithographic centers.

Best Kind of Training

The best training a man can have in this industry is composed of part school and part shop work. The question naturally arises, well, why not then establish lithographic schools in strategic centers with the aim of training lithographic help? Right here a warning should be sounded that to secure equipment and housing quarters for a projected school entails considerable expense. Pledging lithographers in certain areas to send their men to such a school is quite a problem. To secure competent lithographic instructors is another formidable task. Furthermore, all this represents a coordinated project which is not solved once the school is established and functioning. Provision must be made

for it to be carried along for many years. Many schools have been started in various parts of the country. Unfortunately they had to be abandoned because they were not properly started.

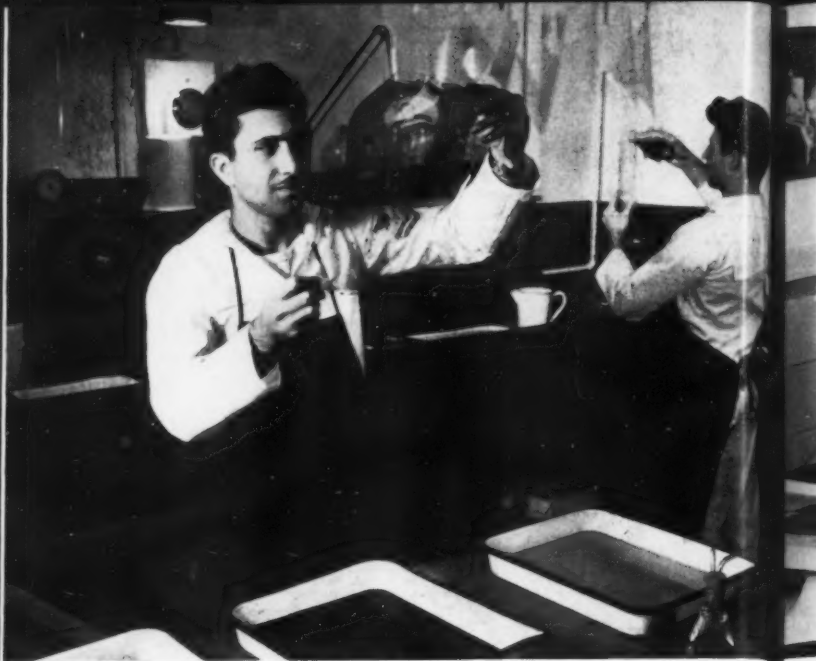
The Technical Foundation

The Lithographic Technical Foundation is doing an excellent job in preparing training material on all phases of the lithographic process. The Foundation, however, does not actually conduct schools, as this is held to be the job of local areas. No doubt some schools will be established in the post-war period. These should be considered in the light of need, cost and support of the industry.

If lithographers in a certain area decide to establish a school, it should be organized on the basis that it will be supported and given a fair chance for existence for at least a five-year period.

The Industry's Post-War Future

The lithographic industry will take on much more color work in the post-war period—production entailing the highest degree of skill. In addition, artists and dot etchers are now and will be sorely needed. No one can properly learn to be a dot etcher in a short school course. The training of manpower is a problem which lithographic industry organizations have been considering at length, and any area which intends to establish a lithographic school would profit considerably if it would take advantage of the information available.★★



The above scenes are from the Photo Science Laboratory at the Naval Air Station, Anacostia, D. C. (Official U. S. Navy Photographs)

Lithography in the U. S. Navy

AS THE Allied might surges across Germany, and the pounding from the air arm increases in intensity, we can't help thinking of that quiet little town in Bavaria, birthplace of Alois Senefelder, father of the lithographic process. It is an ironic thought of rather unpleasant nature, when one stops to consider that one of the tools of modern warfare, the device which makes possible the terrifically devastating rain of destruction—the lithographic process—which turns out the maps, charts, training literature and material of similar nature—is the result of the ingenuity of one of the forebears of the enemy . . . but we of the graphic arts respect the work of the Senefelders, Gutenberg, Beethovens and Goethes.

Lithography is playing a most important part in the war effort as the Navy can well testify. The role of lithography is both direct and indirect. In a direct capacity, that is, in the actual use of the process in field activities, lithography is doing its share as a definite part of the operational activities of a number of Naval bureaus. For the benefit of those readers who are not familiar with the organization of the Navy De-

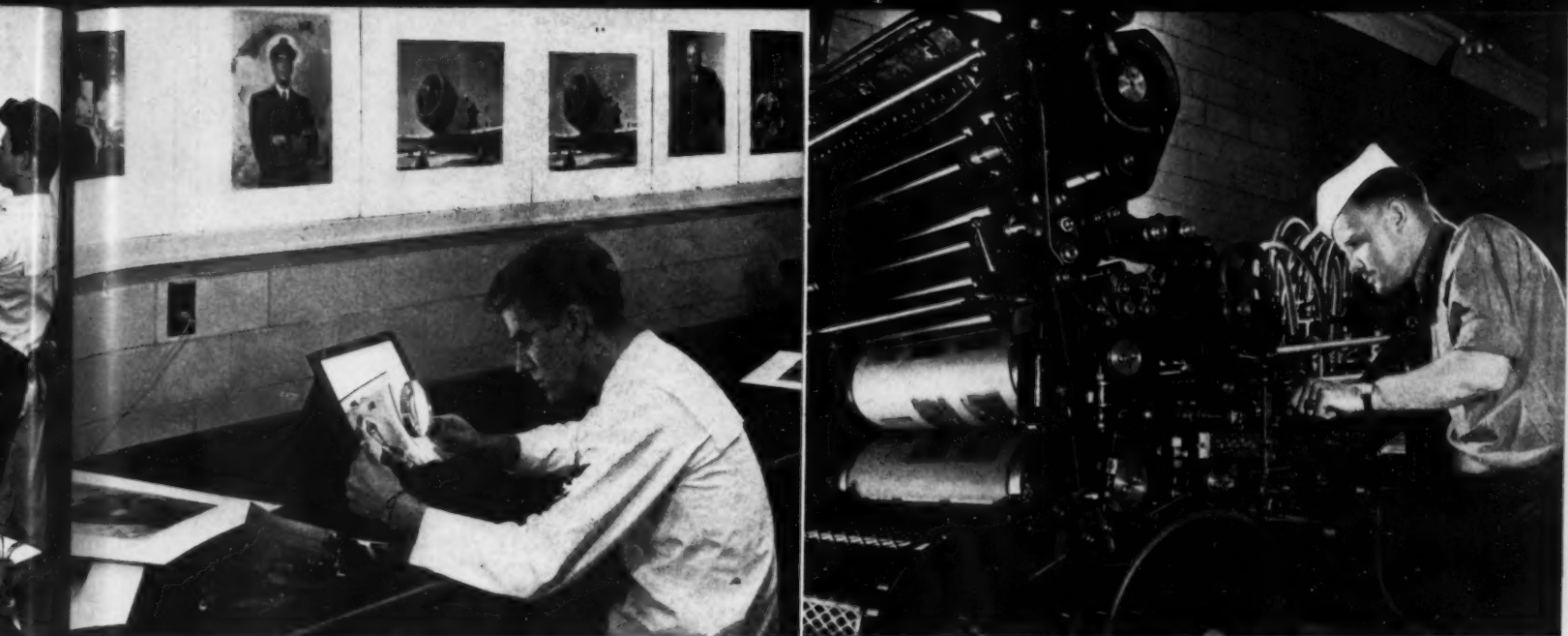
Prepared by the Navy Department for MODERN LITHOGRAPHY

partment, here is a brief breakdown: Administrative Office, Bureau of Aeronautics, Coast Guard, Judge Advocate General's Office, Marine Corps, Bureau of Medicine and Surgery, Bureau of Naval Personnel, Commander-in-Chief and Naval Operations, Bureau of Ordnance, Office of Procurement and Material, Bureau of Ships, Shore Establishments and Civilian Personnel, Bureau of Supplies and Accounts and Bureau of Yards and Docks and other offices. Each of the bureaus serves a different purpose and within each bureau is a further breakdown into departmentalized divisions.

Not all of the bureaus require lithographic plants but such organizations as the Hydrographic Office, a division of Naval Operations, maintain their own plant because of the specialized nature of the work required. The urgency and confidential nature of certain types of reproductive material necessitated the establishment of stream-lined lithographic plants to turn out countless numbers of urgently needed maps, plans, cryptographic communica-

tions, directives and a host of other types of classified printing. As needs dictated, conveniently located plants were established in the field.

THE activities of the Hydrographic Office plant were publicized in the September 1944 issue of *Modern Lithography* under the title "Lithographed Charts Guide the U. S. Navy" so that it won't be necessary to go into details concerning this installation except to review the highlights. Over 3,000,000 charts a month are turned out on 12 offset presses run on three eight hour shifts a day. The charts employ from 4 to 6 colors in close register. Some 364 employees are under the supervision of Lt. Henry T. Birgel, Officer-in-Charge of the Lithographic Division of the Hydrographic Office. Besides the presses (seven 42" x 58" single colors, one 42" x 58" two color, two 17" x 22"s and two 28" x 42"s as well as five Multiliths for smaller jobs), the balance of the reproductive equipment includes a proving press, camera equipment (four 40"s and a 24" for film and dry plates), and the platemaking equipment, whirlers, printing frame, graining machines and other incidentals.



Above are more scenes from the Photo Science Laboratory at Anacostia. Right: An offset press in the Graphic Arts Division. (Official U. S. Navy Photos.)

To relieve the burden of "communicating via pictures" on the photographic branch of the Bureau of Aeronautics, a small lithographic installation reproduces material of confidential nature at the Photographic Science Laboratory, Anacostia, D. C. Three hundred line screen on deep etch plates is used commonly with very satisfactory results for the rendering of fine detail in aerial photographs.

Another activity recently brought to the public's attention was the Advanced Base Photo-litho Unit (See *Modern Lithography*, December 1944). As an integral part of the Navy display in connection with the Sixth War Loan Drive at the recent U. S. Navy exhibit held in Chicago, this unit attracted many thousands who viewed the role of lithography in the Pacific war. This activity was developed in the Photo-Lithography Section, Bureau of Aeronautics, under the supervision of Lt. Arthur C. Sias, USNR, and it doesn't take too much exercise of the imagination to understand why when one considers the relation of aerial photography to reproduction. Some day the story will be told in detail but security regulations do not permit the revelation of the remarkable achievements of our air arm in the realm of intelligence work through air reconnaissance and immediate dissemination of the observations.

Each of these units consists of two steel arch rib huts (similar to Quonset Huts) but one of which houses the equipment and is completely air-conditioned to maintain 50 per cent relative humidity regardless of the location, whether it be in the hot, humid tropics, the temperate zone or the cold, dry arctic regions. The second hut houses the supplies of film, paper, printing ink, etc.

The equipment hut contains in proper arrangement a Varityper machine, a copy layout table, vacuum printing frame, negative layout table, a 24" x 24" camera using a magenta contact screen, vacuum back transparency holder for use with color transparencies, a vertical plate whirler, a plate grainer, a 20" x 22½" offset press, a hand powered trimmer, a paper drill, and stitcher, air brush and sundry items. An Ozalid printer machine is included for use when a short run or the time factor makes even offset production inadvisable. In the dark room are sinks of stainless steel with special equipment for filtering water and solutions, and special equipment includes a film storage cabinet with cutter and tropical refrigerating unit.

Located on every battle front and at every major air base is this amazingly compact "package" for the ready reproduction of vital data. For sheer speed, it has no equal when comparisons are made.

The attractive brochure "Fighting Dollars Back a Fighting Navy" which was distributed at the hut in Chicago best describes the place of the unit in the Navy effort. We quote the entire editorial message from this booklet:

Printing Goes to the Front

The photo-lithographic printing process is a hard hitting "behind the lines" military weapon. Known also as offset printing, this process is not a military secret; however, its military value cannot be minimized.

The swift tempo of war does not confine its needs alone to terrible weapons of destruction. As expeditionary units invade hostile shores, as advanced air bases take shape, and as military outposts everywhere organize to carry the fight to the enemy, the need for important accompanying printed material becomes imperative.

The importance of photo-lithographic printing is manifested clearly to American Military commands on the world's remote battle fronts. Ground and naval forces as well as air attacking and bombardment groups realize and appreciate the strategic planning value of sharp clear cut pictures of their objectives. The pre-raid ready room lecture has become familiar routine to bombing pilots, with photo-lithography furnishing the bombing charts which enable the pilots to review the terrain and nature of the target to be attacked.

Speed is the keynote of this war, military commands demand and must get speedy reproduction of vital photographs and documents. For example, pictures of targets brought back for processing at twilight of one day can be prepared by the photo-lithographic process for use on the following dawn



Pressroom of the modern Lithographic Division of the Navy Hydrographic Office near Washington, and some of the 3,000,000 charts per month produced there.

—at the rate of 3,000 to 5,000 copies per hour.

Today, photo-lithography is the answer to fast, accurate reproduction of confidential military documents, maps, and reports on which strategy for future operations is based.

The term "package" was used to describe the Advance Base Unit. No better term comes to mind for no matter where the flow of battle rages, a complete unit can be installed in a matter of hours. This is made possible by foresighted planning on the part of a handful of lithographic authorities in uniform who spent a year in perfecting the plans. Every item needed in one of these plants is catalogued from the housing to the operation. The smallest details like screws and tacks are itemized on the Advance Base Initial Outfitting list and a ready supply is based nearby for spot installations. Plans, blueprints and instructions for every step of the war are part of the picture so that even unskilled help can erect a plant in a minimum time allowance and can place every machine in its proper position before a detail of operative personnel arrives. Space limitations do not permit a detailed history of the photo-lithographic section but some day the facts about this remarkable contribution should be told.

Since in a sense, a ship or task force represents a floating base, shipboard installations of lithographic equipment are also part of this picture. The Navy's Bureau of Ships has control over this phase. Aboard

certain types of vessels, you will find complete lithographic plants to serve the needs of the moment. Small process cameras, specifically designed to fit into necessarily confined quarters, 14" x 20" press, small whirlers, vacuum frames and other equipment are stowed in proper position for quick reproduction. Some Vari-Typing equipment for composition—occasionally a small collection of type faces for hand setting—and the fleet is all "set" for an emergency run.

BY THIS time, we can easily realize that lithography is materiel of war. It is—and is proving its worth in many strategic "spots." Scattered here and there are field units known as specialty plants. The Hydrographic Office Plant is one such. Communications Division, Naval Gun Factory, Naval Ordnance Laboratory and Photographic-Science Laboratory are others.

Where, then, do the men who operate these plants come from? In the main, they come from the lithographic industry where they have been trained in the intricacies of lithography. A roll call of the officer and enlisted personnel would reveal the names of almost every plant in this country. A very careful screening job through the Bureau of Naval Personnel in conjunction with the Naval Training School (Printer) has been accomplished so that any person joining the ranks of the greatest Navy in the world who possessed any graphic arts experience

or skill was immediately tabbed for training in lithography.

However the number obtained from this activity was not sufficient to take care of the demands of lithographic establishments. An industry appeal through the Lithographers National Association and the Amalgamated Lithographers of America locals helped some but it was obvious that something would have to be done to augment the training obtained from civilian lithographic establishments . . . which brings us to the Naval Training School (Printer)—a litho training school based at the Naval Air Station at Anacostia.

This school is designed to train men for duty in photo-lithographic establishments throughout the Navy such as advance base units, shipboard plants, and various domestic lithographic plants. Since these men have had previous experience in civilian life, it is possible to limit the course to eight weeks' duration. Instruction consists of lectures and demonstrations, and is synchronized with actual practice on the equipment so that the men are thoroughly indoctrinated in the various phases of Navy lithography.

At Anacostia, also, instruction is given to Photographers' Mates in order to acquaint them with the technique of photo-lithography. The course consists chiefly of lectures and demonstrations. While the graduates are assigned to photographic billets, the familiarity with photo-lithography gives them a better un-

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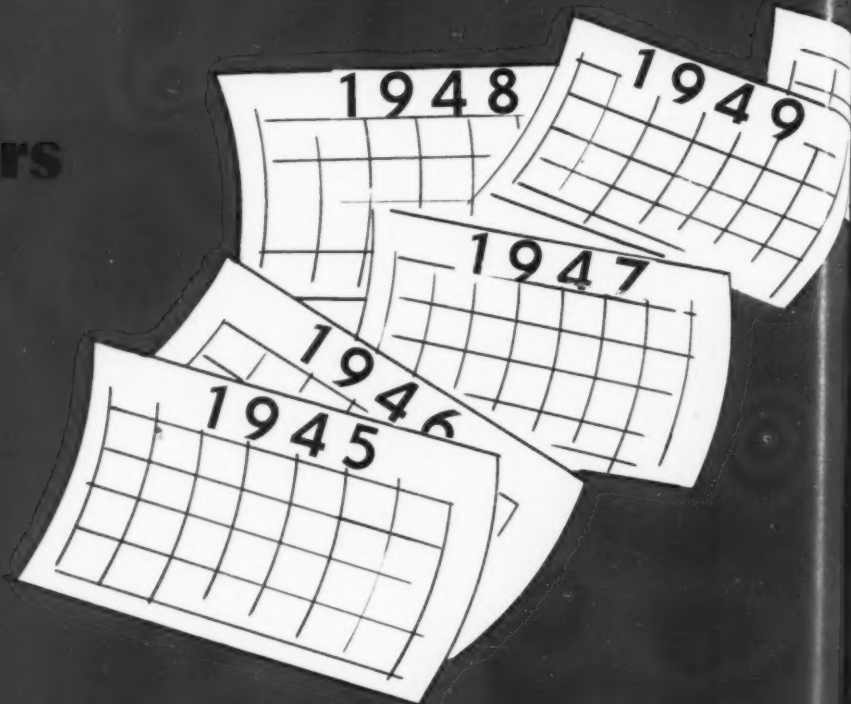
Kodalith Developer teams up with Kodalith Films and Plates to turn out consistently top-flight halftones and crisp, clean line work. Kodak Developers D-8 and D-11 have wide usefulness, and are particularly adapted to the requirements of Kodagraph materials.

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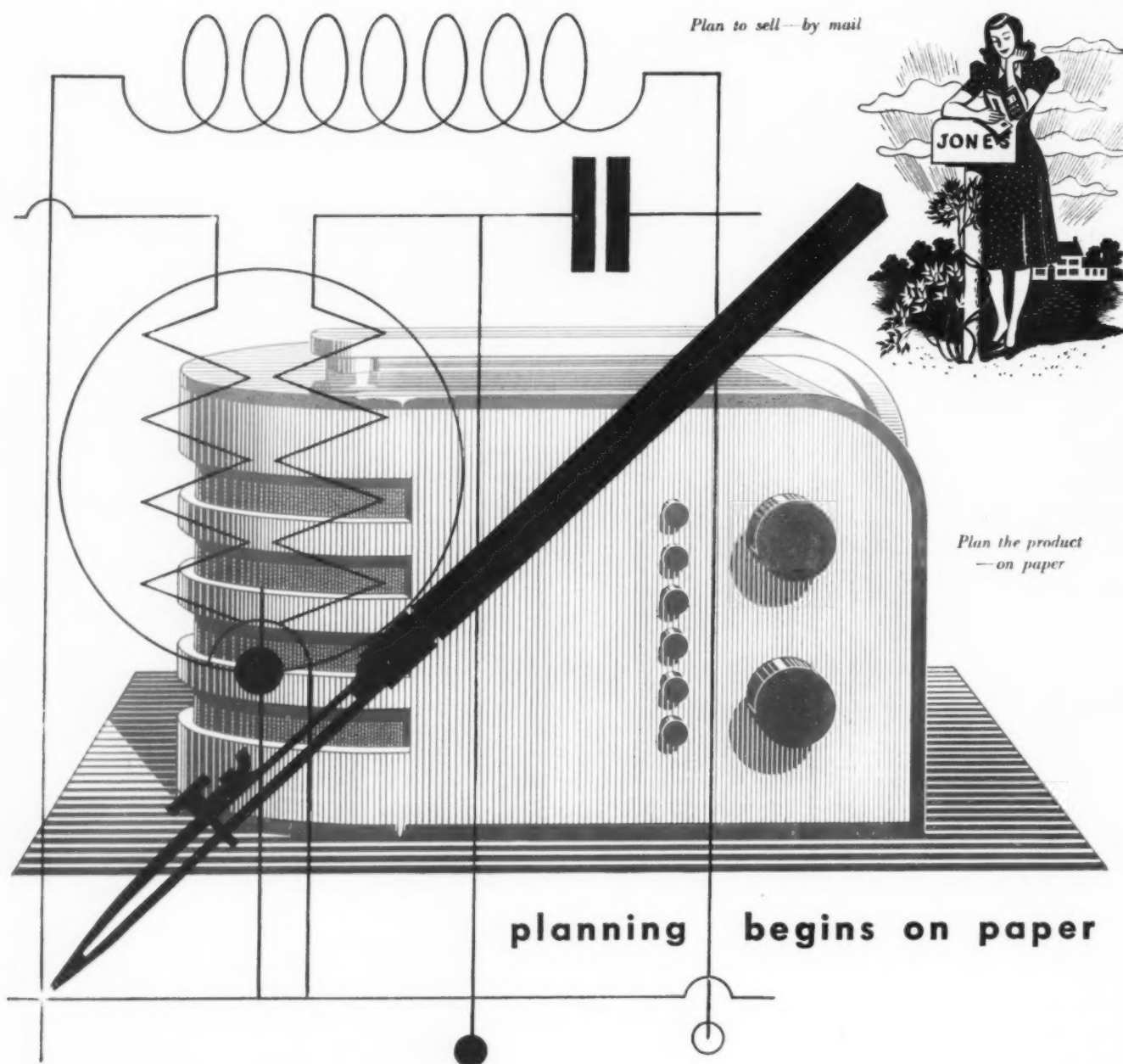
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The post-war radio, incorporating many technical advances developed in the stress of war, has doubtless already been designed . . . on paper. But the difficulty for manufacturers, in the face of the coming competition, will be to win consumer acceptance for their product over that of a rival producer.

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* Among Hamilton Papers, a famous mill-brand family, are included such popular individual brands as Hamilton Bond, Hamilton Bond Script, Hamilton Offset, Hamilton Ledger, Hamilton Mimeo Bond, Old Treaty Bond, Weycroft Cover, Kilmory Text & Cover, Victorian Text & Cover, Andorra Text & Cover.



derstanding of the relationship of the two processes.

SO MUCH for the direct role of lithography in the Navy program. Lithography also plays an important part indirectly in the procurement of printing for the departments or bureaus of the Navy through the channel of the centralized Publications Division under the cognizance of the Administrative Office. The type of reproduction procured is known as departmentalized printing. While no running record is kept of the amount of printing produced via the lithographic method, there is no doubt that the brain child of Senefelder is doing its share. The procedure established by the Joint Congressional Committee on Printing decrees that "all printing, binding and blank-book work for Congress, the Executive Office, the Judiciary, and every executive department, independent office, and establishment of the government shall be done at the Government Printing Office, except such classes of work as shall be deemed by the Joint Committee on Printing to be urgent or necessary to have done elsewhere than in the District of Columbia for the exclusive use of any field service outside of said District." (40 Stat. 1270)

Therefore, under this ruling, all departmental printing clears through Government Printing Office where the decision concerning choice of process is made except in such cases where the nature of the work dictates a particular process. There are such cases frequently, but in the main, GPO

will, dependent on date of delivery, amount of work in various departments, etc., select the process.

While most of the Navy's printing is done at GPO or procured by them from outside contractors, some work finds its way back to the Publications Division on waiver from GPO. Under the supervision of the Director of Publications, Commander Frank M. Knox, a number of these waivers find their way into lithographic plants. Determining factors are usually speedy delivery, distribution list which often affects the selection of the printing plant because of its location in proximity to the list, and other facts.

In analyzing the material reproduced lithographically it breaks down into these types:

A. Material which by nature and content should be reproduced lithographically.

B. Reprints where no existing plates are available or composition would be impractical.

C. Copy, typed and prepared for maximum reduction on specially-prepared typing sheets to save paper and relieve the strain on composing facilities.

D. Emergency requirements where time element requires any facility so long as it is reproduced when needed.

Under Class A such material as charts, maps, posters, lend themselves to this class. Given a reasonable date for delivery, the practical consideration of cost is the deciding factor. The best examples which come to mind are the Industrial In-

centive posters or the Training Aids for Bureau of Naval Personnel.

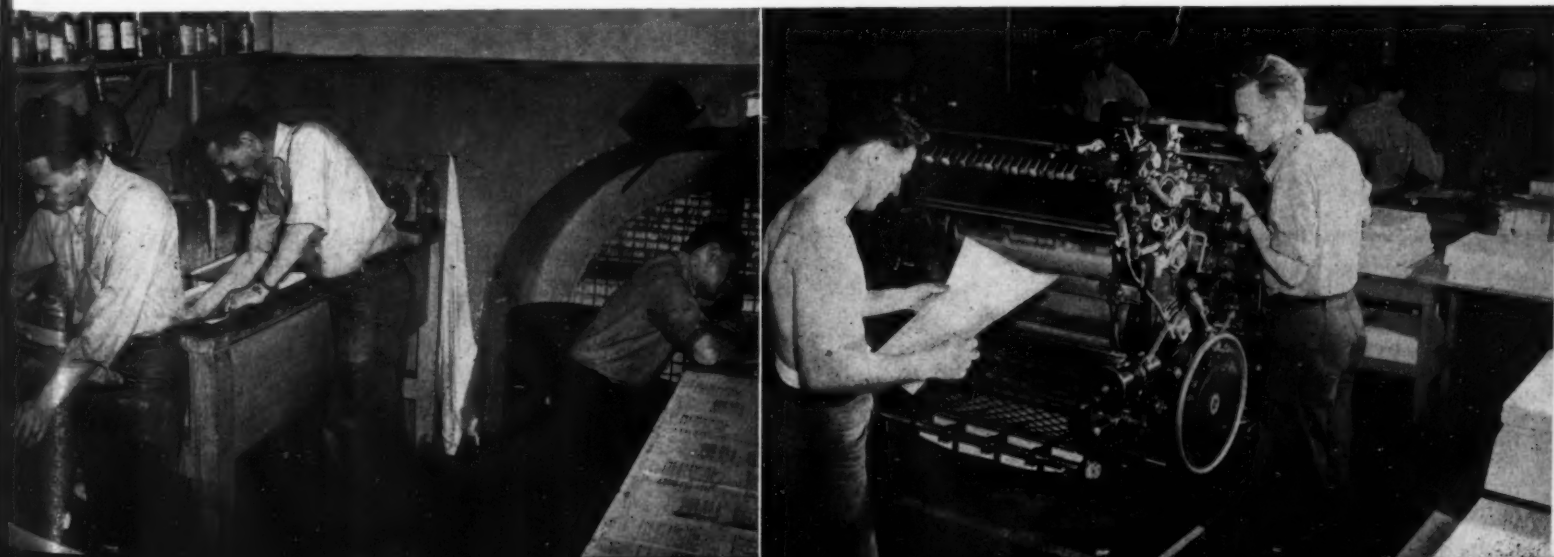
Very often, Class B material turns up which can best be produced lithographically. One shot reproductions will suffice without any time consuming corrections. Collections of letters, directives, manuals which need only be shot and reproduced without expense of composition or type setting; elaborate forms, reprints of manuals where no plates or type exists, plans of huge proportions, etc.

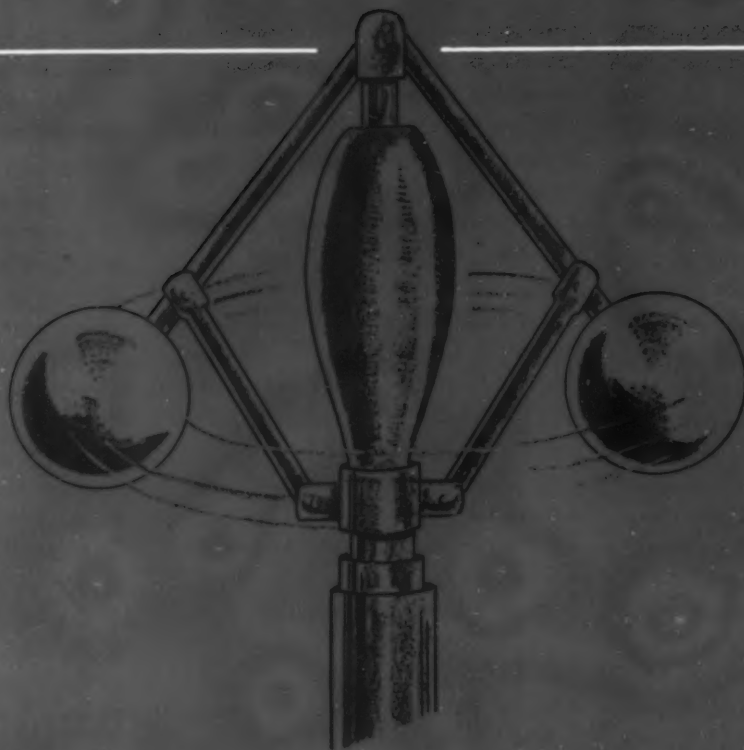
Class C material consists of such printing as directives and bulletins needed in a hurry and where facilities exist for ready typing by Vari-Typer, electromatics or regular typewriters but are controlled for waste by regulations calling for reduction in reproduction. IBM material also fits into this category.

In the last designation, D, perhaps the classic example is the case of the Climatic Atlas of Japan and Neighboring Countries. Here was a problem where time was all important and in which lithography came through with flying colors to save the day. With data about climatic conditions in Japan almost unbeknownst to us, a copy of this important document turned up. It was prepared by the Central Meteorological Observatory of Tokyo. Both the Army Air Force and Navy were most anxious to obtain a number of copies for immediate distribution. The book consisted of a hundred pages of plates, size 21" x 15½" trimmed, in solid colors and tints with a great deal of type data. With the pressure on from

(Continued on Page 105)

Two scenes from one of Navy's largest overseas lithographing and printing plants located on New Caledonia Island in the Pacific.





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Equipment and Supply Firms Do Broad, Varied War Jobs

WEAPONS ranging from heavy artillery down to the most minute precision part of an optical instrument have been produced in quantity by lithographic equipment and supply manufacturers who in peacetime made such products as offset presses, cutters, photo-composing machines, proving presses or cameras. Manufacturers of paper, ink, chemicals and film have played, and are playing, an integral part in the great war machine which is functioning so efficiently today. Army-Navy E awards and other awards for war production have officially paid tribute to the jobs done by these graphic arts firms.

Heading the list of heavy equipment firms supplying the lithographic industry are the press manufacturers, some of whom converted large percentages of their facilities to defense production even before Pearl Harbor. During the war, instead of offset presses, such things as ordnance and naval guns, gun mounts, recoil mechanisms, sub-assemblies for aircraft, ships, and land mechanized equipment, and other types of heavy precision products, have occupied the extensive facilities, manpower, and engineering brains of these lithographic equipment manufacturers. Machine tools, with which other manufacturers can produce war material, have also been an important product of these graphic arts firms.

Important too have been the special lithographic presses and other equipment built by these companies for full time war production of lithographed material as described in accompanying articles. Specially designed small compact offset presses have been developed for use in trailers, ships, advance bases, and in other places where lightness and

compactness are vital. Proving presses for use in the production of templates have been a vital factor in breaking all records in aircraft production.

Replacement parts, press rebuild-

A great deal of the work of lithographic equipment and supply manufacturers cannot be reported as yet, but the accompanying article does provide a glimpse of the tremendous responsibility being carried by these firms. Lithographers, caught in the squeeze of manpower and materials shortages on the one hand and increasing demands for deliveries on the other, may find in this article some revealing reasons why supply and equipment firms are not always able to offer all of the help they would like to the lithographic industry.

ing, and maintenance, have played an all-important role in keeping existing presses rolling through the war period.

Photo-mechanical equipment manufacturers have also devoted virtually 100 per cent production to war. Cameras and other lithographic equipment have been manufactured on high priority for war use, and in addition, special cameras have been developed for production of templates and other war products. Also special compact cameras and platemaking equipment have been designed and produced in volume for the special military lithographic operations where ordinary equipment would not meet size, weight, or other requirements. These companies have also gone far afield from their normal peacetime production, and have used their engineering skill to make precision parts and optical equipment unrelated to lithography.

The fact that paper is being manufactured at the present time at the

rate of 17,300,000 tons per year, compared with 13,509,000 tons during the first year of the war, emphasizes the role of the paper mills in the conflict. And the fact that, in spite of this tremendous increase in paper production, there is still an acute shortage for civilian use, indicates the vital need for paper in waging a global war.

In addition to the production of such vast quantities of paper, all kinds of special papers for definite war uses have been developed. Fluorescent paper, and wet strength paper, are two examples familiar to many lithographers who have handled war contracts. Fluorescent paper, which glows in the dark activated by invisible ultra violet light has played an important part for maps and charts for use in blacked out planes and other places. Resin impregnated wet strength paper has the remarkable quality of maintaining its strength even after soaking in water, and its use in the field especially for maps has made them entirely legible and useable where maps lithographed on ordinary paper would be useless because of rough treatment and moisture.

Makers of inks and chemicals for lithography have played an unheralded war role, because much of the work they have done has been in the field of research—developing alternate and substitute materials to replace important basic materials which war made unavailable. By meeting these problems, the ink and chemicals needed by the war contracting commercial lithographers, and by the many military lithographic plants have been supplied in adequate volume. Lithographers have thus been supplied with inks and chemicals even though many ingredients, thought in prewar times to be absolutely necessary to formulation, were cut off entirely.

The same can be said of roller and blanket manufacturers, who have been deprived of natural rubber since those early war days when Japan was sweeping through the Pacific. Synthetic rubber and other materials have been developed to meet the emergency, and the lithographic

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presses have never had to stop for lack of any of these materials.

Photographic, optical, and film manufacturers have met stringent demands both from the lithographic industry and from the army and navy. Demands have skyrocketed not only for lithographic film, but for film for air reconnaissance, official war motion pictures and still pictures, and X-ray film in unheard-of quantities for medical and industrial use. Precision optical equipment, special lenses, specially built photographic equipment to do specific jobs better than the enemy can do them, have all been a part of these companies' war role.

Lithographic supply firms have also made an excellent record in assisting the government and armed forces in setting up and operating lithographic plants, as well as helping to break in personnel to operate these countless plants. Salesmen have become advisors and technical trouble shooters to government and military plants, and also in commercial plants where inexperienced help must be depended upon.

Another important job carried on by these companies has been in the maintaining of morale. Programs of poster contests, awards for war advertising, trade paper advertising, direct mail, and other methods have been utilized for promotion of the various war advertising campaigns. Equipment manufacturers have even found time to advertise and distribute helpful information on service and maintenance of machinery to help lithographers to help themselves.

The record of these firms, like war production firms in all fields, is all the more impressive when the unprecedented manpower and material shortages are considered. Graphic arts developments have been accelerated and many of these improvements will be evident when manufacturers can again devote their facilities to the making of lithographic equipment. Then, too, a great deal of the work done by these firms can never be published until after the war, because they are still under strict military censorship.★★

Metal Decorators' Group Plans For Broad, Active Program

PLANS for a broad and active program for the metal lithographing industry were formulated by representatives of some two dozen metal lithographing firms attending the three day conference April 16-18 of the National Association of Metal Decorators. These plans provide for the addition of new members to the association and for meetings twice each year for the purpose of studying materials and methods of the industry and exchanging ideas on metal decorating problems. The meetings were held at the Netherland-Plaza Hotel, Cincinnati.

The program got under way on Monday morning, the opening day, with a meeting of officers and directors at which time policies for admitting new members were discussed and other association business attended to.

At a Monday noon luncheon the entire group attending the meetings were guests of Wagner Litho Machinery Co. Acting as hosts were Walter Parkin, president of National Standard Co., parent firm of the Wagner company, James DeGarmo, National Standard vice president, Chris Scheehle, division manager of Wagner and Fred Bailey, Wagner sales engineer. Earl E. Gray, Casper Tin Plate Co., Chicago, president of the association, presided at the head table, and told the group of the organization's activities. Ray Dawson, Metal Litho. Corp., Brooklyn, then described the requirements for active and associate memberships in the association.

At the afternoon session plans of the association were discussed, and it was announced that probably the next meeting would be held in the fall either at Chicago or Pittsburgh. According to present plans this meeting will be devoted to a study of aluminum as a metal for decorating

and fabricating. These plans also include a visit to an aluminum plant.

R. Hoe & Co. was host Monday evening at a reception for the group, held at Hotel Gibson. Clarence Dickinson, manager of the Offset Press Division, and George Carnegie, assistant manager, represented the Hoe company.

THE morning of the second day was spent in a tour of the plant of Ault & Wiborg where the metal decorators saw the production of coatings and finishes from the raw materials to the finished products. Laboratory controls and testing methods were explained. Joseph R. Esposito, president of Ault & Wiborg, and Joseph G. Morris, vice president and general manager, were on hand, and other A & W men acting as guides included Mark W. Frishkorn, George A. Stolorthy, Jules Bauer, Thayer L. Brown, Henry B. Bond, Charles F. Kahnhauser, and Warren Wright.

At noon the members of the group were guests of the same company for luncheon at the Cincinnati Country Club.

At the afternoon session at the Netherland Plaza, a paper, "The Performance of Organic Protective Coatings on Electrolytic Tin Plate," was presented by Charles R. Groff and I. R. Messer of Watson Standard Co., Pittsburgh. Charts were presented which illustrated the results of tests made with different types of coatings on various kinds of metal, baked for varying times at specified temperatures. An active question and answer period followed the presentation.

A reception and dinner were given Tuesday evening by Ault & Wiborg at the Queen City Club. At an informal program which followed, Mr. Esposito presided, and Mr. Frishkorn, who is in charge of the metal

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Metal Lithographers Visit Ault & Wiborg



Top: H. B. Bond, Ault & Wiborg, describes an operation in the A & W Cincinnati plant to a group of metal decorators. Others are (L to R) Ray Dawson, Metal Litho Corp., Brooklyn; George (Buck) Frank, Crown Cork & Seal Co., Baltimore; A. J. Brown, Advance Metal Litho., Long Island City, N. Y.; E. R. Byers, R. M. Hollingshead Corp., Camden, N. J.; M. W. Durham, International Printing Ink; John P. Stetson, Advance Metal Litho; and C. F. Kahnhauser, A & W. Lower photo shows J. M. Chapman, A & W physicist, demonstrating apparatus to (L to R) T. R. Brown, A & W; William N. Misuraca, National Can Co., Brooklyn; William Kerlin (behind Misuraca), Tin Plate Litho Co., Brooklyn; Thomas Fitzgerald, Mundet Cork Corp., Brooklyn; Harry G. Kammerer, National Can Co.; Fred S. Bailey (background), Charles Wagner Litho Machinery Co., Hoboken, N. J.; and Walter C. Kammerer, Pittsburgh Tin Decorating Co., Pittsburgh.

decorating division of A & W, explained the current raw material situation and War Production Board restrictions which control the production of coatings and finishes. He pointed out that manufacturers were restricted to 40 per cent of the oil, 25 per cent of the chrome, and 30 per cent of the rosin, that they used in the base period. Mr. Frishkorn urged the inclusion of specific end uses on all orders for coatings as a means of speeding up deliveries. A spirited question and answer period

followed at which terms such as rosin, resin, phenolic resin, modified phenolic, alkyd, vinylite, and polymerization were defined in lithographers' terms.

THE morning of the third day was spent with general discussions and plans for the next meeting. Time did not allow for the visit to the laboratories of the Lithographic Technical Foundation to be carried out.

A number of applications for mem-

bership were received by the association and these are to be acted upon and will be announced later, Mr. Gray said. The organization was formed during the NRA and has been maintained by a nucleus group since that time. This conference in Cincinnati, however, was the first open meeting which it has held. Besides Mr. Gray, other officers are Winslow H. Parker, Parker Metal Decorating Co., Baltimore, vice president, and William Kerlin, Tinplate Lithographing Co., Brooklyn, secretary-treasurer. Directors include Mr. Dawson; Charles Montgomery, Burdick Co., Brooklyn; William F. Felber, American Metal Decorating, Chicago; Harry G. Kammerer, National Can Co., McKeesport (Pa.) Div.; and Clifford M. VanSyckle, Brooklyn Metal Decorating Co., Brooklyn.

Besides the above, those registering for the conference included Benjamin Altamore and David Cohn, The Burdick Co., Brooklyn; G. D. Atwood, Jr., and Ray Guyette, Decorated Metal Mfg. Co., Brooklyn; Gordon Bartels and J. C. Villa, J. L. Clark Mfg. Co., Rockford, Ill.; Don Brown and Andrew Donaldson, Donaldson Art Sign Co., Covington, Ky.; Joseph Brown and J. P. Stetson, Advance Metal Lithographing, Long Island City, N. Y.; G. F. Buckle, Weirton Steel Co., Weirton, W. Va.; E. R. Byers, R. M. Hollingshead Corp., Camden, N. J.; George L. Dell, Republic Steel Corp.; Fred E. Domke, W. H. Hutchinson & Son, Chicago; W. B. Fitzgerald, Mundet Cork Corp., Bklyn.; George (Buck) Frank, Crown Cork & Seal Co., Baltimore; Thomas L. Henderson, Continental Can Co., Chicago, and A. J. Sigler, of the same company, New York; H. C. Jensen, Heekin Can Co., Cincinnati; Walter O. Kammerer, Pittsburgh Tin Decorating, Pittsburgh; I. J. Koehnline, Wheeling Steel Corp., Wheeling, W. Va.; William N. Misuraca, National Can Co., Maspeth, N. Y.; Roy A. Siesky, Anchor Hocking Glass Corp., Connellsville, Pa., and B. J. Sjostrom, Roy L. Jones Steel Co., Chicago.★★



Our Position

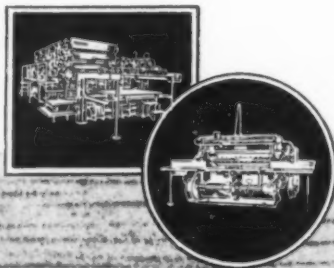
LEADERSHIP AND CONFIDENCE are the foundation of Harris-Seybold business.

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Your Position

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The factual information and experience of printers and lithographers is the best basis for their appraisal of new developments in graphic arts machinery. To them "something new" must be proved to be profitable before it is deserving of consideration.

Each plant should view new equipment in the light of its own individual requirements. The needs of each plant will vary according to its present equipment (its type, its condition) and customers.

Any consideration of new equipment must be guided by common sense and knowledge of the industry. There must be a realization of the factors incident to the development of new equipment.

There is a danger, when regulations are relaxed, that action may be taken purely on the basis of expediency. There is a possibility that people may be stampeded. A planned program should be followed during the transitional period to avoid impairing operations during the long range postwar years.

The needs of the market will determine the printing equipment of the future. Printing equipment is a capital investment—it must have a profitable life over a period of years.

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This is the first official issue of the Western Pacific Edition of YANK. It is offset in two colors, 24 pages, 10 x 14", on a web press.

YANK is Offset on Saipan

YANK, The Army Weekly, is now rolling off an offset press on Saipan, bringing late news, combat stories and pictures to the newshungry troops on western Pacific islands. The first issue of the Western Pacific Edition came out February 23 and was distributed to men in the Marianas, Carolines, Palaus, Marshalls and Gilberts. This first issue took advantage of the lithographic process to produce 24 pages, 10 x 14 inches generously illustrated with large halftones and flat color layouts.

The press, a Webendorfer web offset, was shipped, along with other

equipment, to far-off Saipan for installation in a Quonset hut under the palm trees.

YANK reports that there was only one man on Saipan at that time trained to supervise the installation of the press—Sgt. Douglas Eaton. Just as the press arrived, Sgt. Eaton suffered a broken leg in an accident. The rest of the crew took over and Sgt. Eaton supervised the installation from a hospital cot.

Illustrations on this page show some of the men and equipment engaged in the production of YANK on Saipan.

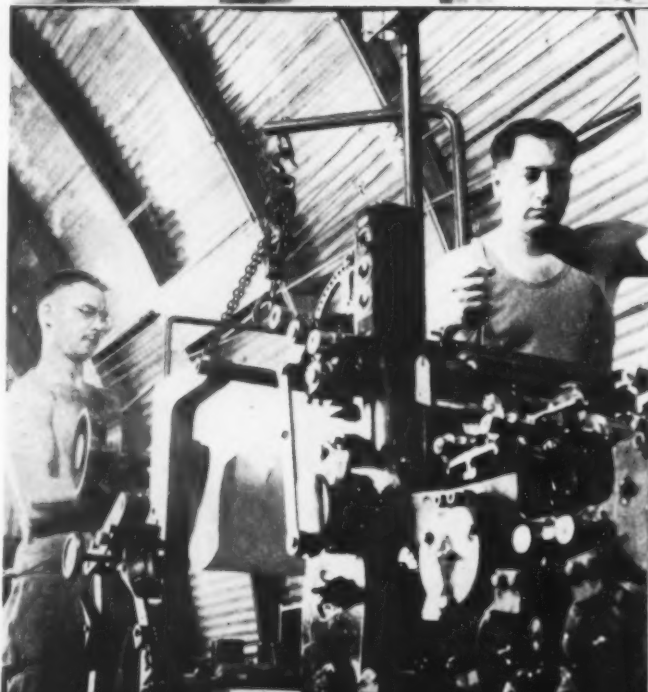
Maj. Justus J. Craemer (on left) officer in charge of YANK's Saipan edition, confers with Lt. Albert L. Hasty and Cpl. Vernon Burch, while the Quonset hut is under construction.



Far Right: Press foreman Sgt. Douglas Eaton threads the web through the press.



Lower photo: Pressmen Pfc. Harold Banton and Pfc. Charles Famiglietti put the newly installed press through a test.



Far Right: Pfc. Famiglietti and Pfc. Banton examine one of the first forms to come off press.



Stainless Steel Offset Plates

BY CLEMENTS BATCHELLER

SPECIALLY processed stainless steel has proved itself a good metal base upon which to construct an improved planographic printing image.

A technical investigation of the possibilities of utilizing this alloy to produce a superior offset master has been in progress over a period of years, and the results obtained have displayed such promise as to fully warrant its extension to embrace every phase of the modern printing art, involving the use of metal printing plates. Because of the extended scope of such development, it becomes necessary to limit the present discussion to those improvements which have been made in the currently used alumen image plate.

In the prosecution of this program, closest cooperation between the steel-mill metallurgist, master platemaker and craftsman printer has been constantly relied upon to not only produce, but also fully evaluate each and every quality of improvement which has been built into the "processed" stainless planographic master. From such combination of effort, has evolved the all-metal offset plate, comprised entirely of processed stainless steel.

In the proposed substitution of an alloy steel for the currently used metals of zinc and aluminum, such terms as, "stainless" and "rustless" are usually designating titles under which ferrous metals alloyed with specific amounts of chromium or chromium-nickel are best known. Naturally these suggest little to the average lithographic, gravure or letterpress operator, whose experiences for the most part have been confined to the processing and use of zinc, aluminum and

copper as the basic metals comprising the currently used plate types.

Before any evaluation of the respective merits of specially processed stainless steel, and the best which can be expected from its soft metal counterpart (and structurally defective alumen image) can be made, a brief summary of their respective physical and chemical characteristics should be given.

BOTH zinc and aluminum are relatively soft metals and of comparatively low tensile strength when

compared to the normal physical properties of stainless steel. The alloy has a surface hardness which is nearly $5\frac{1}{2}$ times greater than either of the soft metals, and a tensile strength of about 85,000 pounds as against a maximum of 22,000 pounds for zinc or aluminum.

Stainless steel lends itself most satisfactorily to simple heat-treating steps at the hands of its makers to offer every essential physical quality to permit its use as a highly suitable base metal for most types of printing plates. Both of the softer metals

Notes on Stainless Steel Plates

(Mr. Batcheller is not a newcomer to the pages of MODERN LITHOGRAPHY. In November, 1941, his article "Why 18 and 8?" dealing with stainless steel plates for lithography, was published in this magazine. He states that because of the enormous expansion in alloy steel making during the war, costs of the lower chromium content alloys will be substantially lower than previously.)

The question of weight of large plates is purely dependent on the degree of mill rolling, and their degree of stiffness is effectively controlled by annealing, he says. Various plate sizes, from 50" x 70" down, and in the necessary gauges, have been fully tailored by alloy producers to meet whatever conditions are required. Mr. Batcheller reminds us that heretofore the initial selection of stainless was from jobbers' stocks, and all types, irrespective of their suitability, looked alike to most lithographers. Electrolytic grainning of stainless overcomes those difficulties which early users of steel experienced with ball grainning, he says.

Stainless steels of all types differ very materially in their physical properties from common, carbon steels. They do not lend themselves to the various hardening or tempering steps common to soft steels under the action of heat, but to the contrary, become

hardened only under the application of such "cold-work" as mechanical grainning, bending, stamping, forming and the like. Where applied heat is the usual hardening means for carbon steels, such medium serves in an exactly opposite capacity to reduce chrome or chrome-nickel stainless steels to any degree of suitable softness and flexibility desired.

Stainless steels to produce the desired physical qualities required by the consumer, are usually submitted to various annealing steps by the steel mill to furnish the product as; full hard, half hard, quarter hard and soft. Stainless plates which more closely approach the physical properties of common steel, and as used as the foundation plates for lithographic use should be annealed to full softness to offer adequate ductility and flexibility to permit easy and rapid application to the press roll.

Stainless steels, according to the author's investigations, which are to be processed for offset plates, need never contain nickel as an alloying element, and in fact, due to the methods used in their preparation, only moderately low amounts of chromium metal. Reasons why these low alloy content steels may be effectively used for offset plate making, have been indicated in these articles.—Editor.)



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lack such property of physical readjustment; therefore any degree of improvement must resort to some proper alloying step as a corrective of such defects.

Because of these favorable factors common to stainless steel, it becomes unnecessary to suggest to either the platemaker or pressman, that such commonly troublesome problems as plate "stretch" and "creep" under fast rotary press operation become negligible. Such properties also make possible the use of virtually paper-thin stainless for the moderate and smaller plate sizes, with the full assurance that they will hold their position upon the plate roll equally with soft metal plates of from four to five times greater thickness. These lighter plates are available in thicknesses of from .005" and up, and in widths of 36" by any length. The larger plates of from 50"x70" and down are produced from stainless sheets.

Additional features of the stainless plate is the ability of its very much finer and harder grain surface to almost indefinitely withstand the usual frictional wear from the press rollers, and the fact that this type of plate requires nothing from the press fountain but clean water, and a minimum of that. Any of the currently used fountain solutions to keep plates from possible scumming, tinting, maintaining a proper balance between ink and water, or continued grain sharpness have been found unnecessary for the optimum functioning of the stainless master in every department.

An interesting phenomenon which appears characteristic to the processed stainless plate, is its seeming ability to function effectively under a minimum water film, and to a point where the plate appears to be printing in an almost visibly surface-dry state. Such condition in no sense suggests an index to the future possibility of "dry-offset," as there is actually plenty of moisture well concealed within the surface and sub-surface areas of the plate to permit its effective functioning under all necessary conditions.

Such phenomenon may possibly be attributed to the degree of capillary



The author is president of
The Coloron Corp., Albany, N. Y.

attraction of the specially grained alloy steel surface in its surface tension effect. Such quality is evidently very closely akin to the characteristic properties of the "microscopically" grained stainless plate to adsorb rapidly and retain an adequate water film upon its surface, and to a lesser degree absorb such moisture within its surface. The reasons why this specially "grained" alloy steel master will carry a greater volume of water within its surface structure, than either a zinc or aluminum plate, grained by a mechanical method will later be disclosed in a description of the method used for the chemical graining of the alloy plate to increase enormously the area of its working-surface.

IN an examination of the chemical properties of both the zinc and aluminum plate and those of the specially processed stainless master, we are at once confronted with the paradox that while the element "oxygen" constitutes an arch enemy of both soft metal plates (in its dislike for printing ink, etc.) for reasons long recognized and easily understood, its presence upon the surface of the stainless master is at all times highly essential to provide this alloy with its maximum degree of corrosion (against rusting) resistance.

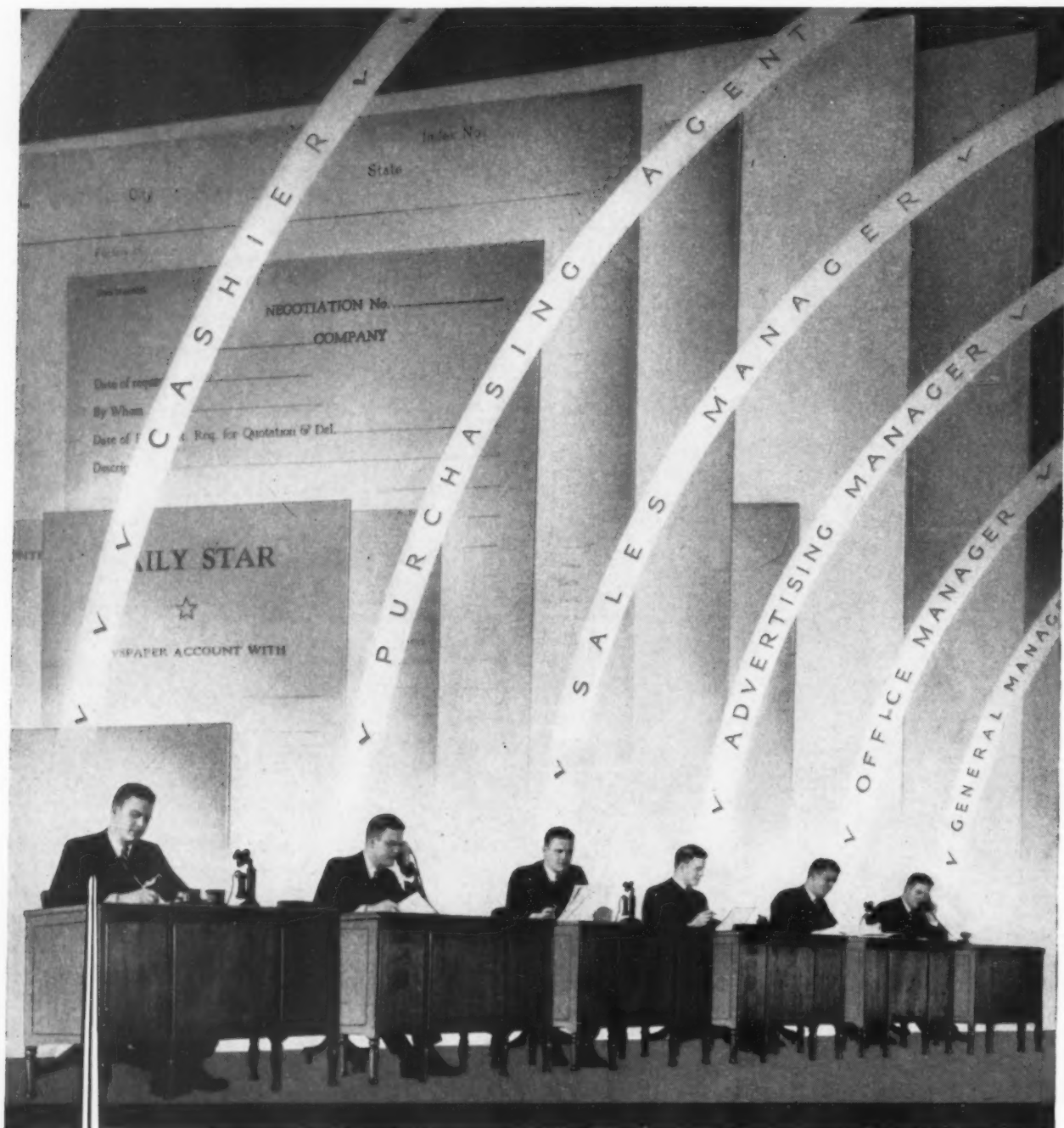
Thus, while oxygen (as a residual oxide or carbonate film of the metal) is conclusively negative to the full and

proper functioning of both the zinc and aluminum printing plate, this element becomes essentially positive, and a most useful factor permitting the optimum printing performance of the processed stainless plate. In fact, if ways and means had not been successfully worked out to initially, chemically utilize this element to produce a basic, colored oxide film, both in and upon the surface areas of the grained stainless plate, its all-important, wholly metallic printing image could not have been produced.

This chemically produced, colored oxide film, serving as the business-end of the all-metal planographic plate, when processed to its ultimate printing image stage undoubtedly constitutes one of the most radical changes so far effected in an offset plate of this order. This film is a composite comprising oxides of iron, manganese and chromium. Its chief quality resides in its very high affinity for ink, in which degree it is sensitive to "grease" to a far greater extent than the currently used, "stuck-on" albumen-chromium image.

This property is believed to be partially due to the fact that the colored oxide film consists in part of chromium metal (as oxide) insofar as the presence of this element contributes to both its adsorptive and absorptive properties, and the relatively high degree of porosity which may chemically be built-in to such metallic film to function in the capacity of a printing image.

While the above factors are purely physical in their function, and are produced under the steps of the applied chemistry involved, there still remains some logical explanation for the high degree of sensitivity of the metallic oxide for grease. With no desire to tangle with the somewhat "fuzzy" chemistry involved in the creation of such similar property in the albumen-dichromate film, it must suffice for the present to state that such property of the metallic film is due to its typical physical structure; also the fact that both the film and basic alloy metal plate, contain appreciable amounts of chromium metal.



W*ar* has proved that envelopes are *essential* — as couriers, expeditors, protectors of work and goods. War has found new ways to employ envelopes . . . added new styles, sizes, materials . . . *War has first call* . . . We who manufacture, sell, print *and use* envelopes must conserve and share . . . but we can think and plan toward the day when the best in style and paper will again be available to help us toward a lasting and prosperous Peace.



UNITED STATES ENVELOPE COMPANY • SPRINGFIELD 2, MASSACHUSETTS

MODERN LITHOGRAPHY

Stainless steels must contain definite amounts of this metal to furnish their rust-resisting quality, and when processed to exhibit either an etched or high polish surface, become notoriously receptive to grease. Their semiporous colored oxide film is even more so. Such tendency can be easily distinguished in the ability of the alloy to readily, "finger-mark", and the difficulty experienced in removing such disfigurement created by grease adsorbed from the human body. If one would care to do so, just apply a good moist hand impression, roll it up, and go ahead with the printing step.

LOOKING at the all-metal planographic plate from the standpoint of improvements indicated as a foundation upon which to construct a superior metallic printing image, these points would be included:

1—Aside from the fact that the colored oxide image is very highly receptive to the direct application of ink, and retains such quality during any extended printing run which the plate may be called upon to perform, the retention of this metallic image to its plate base is so secure as to offer not the slightest chance that it will follow the tendencies of its albumen prototype, to walk off the plate; go blind in its work-up; or even partially lift from the plate surface in the running of certain of the really "tough" inks, such as, the chrome metal group, reds, zinc whites or milori blues.

The metallic image represents a tough, rugged printing medium which is practically an integral part of the plate surface, and because of its relative hardness, becomes almost indestructible from frictional wear under the action of the press rolls, or other contributing factors which so commonly affect an albumen image. The metallic image cannot swell, or change its position upon the plate surface, irrespective of what, or how much "dope" is thought necessary in the press fountain. Most of these currently used acids and salts which have an active, and often highly negative, effect upon both the surface structure

and image of a zinc or aluminum plate, produce no such corresponding results upon either the stainless plate or its metallic oxide printing image. (*A description of this oxide image and how it is produced on the plate will be included in Part Two of this series, to be published in June.—Ed.*)

2—The method of processing the basic, colored oxide film to produce its printing image follows much the same pattern currently used for creating the conventional albumen image, except that the steps involved are actually simpler, and may be performed in less time. Such precautions as are seemingly necessary in the handling of the albumen image, are for the most part wholly unnecessary to produce the all-metal image to a point where the plate is ready for the press. In its final stage of processing, the metallic image represents a smooth, semilustrous colored surface having sufficient hardness to preclude any possibility of grain break-through irrespective of the degree of frictional pressure applied to the plate surface.

The ultimate metallic image will produce under any proper printing step its ink counterfeits in higher fidelity than can be accomplished from an albumen image. In other words, this metallic image represents an exact reproduction of all of the characteristics of either a positive or negative film, as such films are initially used to produce such image. Every quality which is contained in the negative film will be found in the corresponding metallic image.

Because of those indicated physical characteristics which have been found as common to the metallic printing image, experimental press runs have repeatedly demonstrated that the "lift" of the ink from the smooth image surface to the blanket is completely unaffected under any wide variation of press speeds, and perfect reproduction can be obtained without difficulty at the highest speeds attainable by modern offset presses. It is when the all-metal image actually goes to work on super-quality, halftone reproduction, up to and including 400 screen, that the distinctive

qualities of the plate begin to show themselves; also the virtually unlimited printing life of the plate becomes fully apparent.

3—In the various processing steps which the plate must undergo at the hands of both the platemaker and pressmen to ready it for the printing step, none of the usual precautions necessary to the handling of the soft metal albumen plate are necessary. There is no occasion to "fight" oxygen attack, as this element is always invisibly present in the non-printing areas of the plate; also very visibly evident in its colored, oxide image, which is equally not the least fussy concerning the outcome of the oxygen "kiss."

The matter of elapsed time between the make-up and use of the stainless master is likewise of little or no consequence. The all-metal stainless plate may be made up today and used a year hence without the slightest loss or alteration of its full printing quality. Such fact has been amply demonstrated on plates which have been stored for three years (without gum) and when returned to the press and rolled up, continue to produce perfect halftone impressions. Likewise, high screen, halftone plates, produced entirely as "press" transfers from an original master plate, have given equal performance.

The recovery of the all-metal stainless plate for further printing use is equally as simple as the steps currently used for the reprocessing of either a zinc or aluminum plate, and in all probability such recovery costs will be found to be appreciably less. This is partly due to the fact that the electro-grained, hard grain surface of the all-metal plate displays no appreciable wear except under the most extended press runs, thus permitting its re-use without resorting to the usual step of re-graining.

(*In Part Two of this series, which is to be published in June, the author discusses the type of grain and how it is obtained on the stainless steel plate through an electrolytic process; and the oxide image theory and application.—Ed.★★*)

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The Control of Oxidation on Zinc

by

CAPT. MICHAEL H. BRUNO

Corps of Engineers Research Officer
Army Map Service

THE control of oxidation on zinc plates has been the dream of lithographers since the transition from stone to metal. Oxidation is a whimsical phenomenon. It can be harmful or it can be beneficial depending on whether or not it is under control. The harmful variety can be the worst single source of trouble in the whole lithographic process. And yet, oxidation troubles with zinc are eliminated by actually oxidizing it.

The oxidation of zinc is as unpredictable and, until recently, as uncontrollable as the weather because oxidation is actually caused by the weather. The threat of oxidation on zinc exists wherever the relative humidity is over 40% and this threat increases with higher temperatures and humidities. When the weather is bad, troubles from oxidation can be so serious that the lithographic process becomes almost impractical. This is especially true in the tropics where the temperature and humidity are so high and zinc oxidizes so rapidly and completely that its use has been almost impossible. It was this serious condition in the tropics that sponsored and expedited the development of the present new means of controlling the oxidation of zinc.

Oxidation in Lithography

Technically, the term "oxidation" describes many different types of reactions between many different substances. Typical reactions which should be familiar to all lithographers are: the light hardening of bichromated colloids like albumin,

gum, glue, casein and gelatin; the exposure and development of photographic emulsions; dye formation in color photography (dye-coupling); the production of blue prints and sepias (Brownlines or Vandykes); and the drying of printing inks.

Lithography, however, attaches a specific meaning to the term "oxidation" associating it exclusively with the reaction between a metal and oxygen, moisture, carbon dioxide and other corrosive elements (like salt) in the air. This type of reaction is generally called corrosion and the product can be an oxide, an hydroxide, a carbonate, or a combination of them. The reactions proceed in stages depending on atmospheric conditions and the nature of the corrosion products. Some oxide films are impervious and retard any further oxidation of the metal. Other films are more reactive than the metal itself and, under bad atmospheric conditions, they actually accelerate corrosion to the point where the metal is completely dissipated.

The fundamental principle of lithography, of course, is that grease and water won't mix. A satisfactory printing plate must consist of image areas which attract ink and non-printing areas which attract water. The lithographic metals have good affinity for ink but affinity for water must be induced artificially with an etch. In order to control the water carrying properties of the etch, it is important that the etch lay on a continuous surface. This surface can be any compound, even an oxide, so

long as it is inert, homogeneous, and firmly bonded to the metal. Trouble is encountered when the etch lays on a surface which does not have these properties. An unstable surface subject to variable oxidation, destroys the effect of the etch and leads to the countless troubles associated with oxidation.

The two common lithographic metals, zinc and aluminum, provide excellent examples of these principles. Both are active metals indicating strong tendencies to oxidize. Chemically, aluminum is much more active than zinc and it would be expected to oxidize more readily than zinc. But in actual work, zinc offers more oxidation difficulties than aluminum. The answer to this apparently paradoxical situation is simple.

Aluminum is so reactive that it is never encountered as a pure metal in lithography. As soon as its surface is exposed to air, an homogeneous film of aluminum oxide immediately is formed which is so impervious and inert that it is attacked only by hydrofluoric acid. Atmospheric conditions have little effect on the oxide film and it is so firmly bonded to the metal that it behaves like part of the metal itself. Thus, the aluminum oxide film on an aluminum plate provides an excellent printing surface for lithography. The pure metal itself would be utterly useless because of its reactivity.

Zinc, on the other hand, oxidizes in moist air to granular, loosely held and easily removed suboxides, oxides, basic carbonates, carbonates, etc.

These are not inert because moisture and other corrosive elements in the air can penetrate and attack them readily. The degree of oxidation depends on the particular atmospheric conditions. As the concentration of moisture and other corrosive elements increase or if the activity of these elements is increased by higher temperatures, the oxidized areas serve as nuclei for further oxidation or chemical reaction of the metal. Complete oxidation is easily recognized by the presence of white corrosion products. These pit the metal and are sometimes so serious that even regraining cannot remove them. In its early stages, however, oxidation produces suboxides which are gray in color and not readily distinguished from the metal itself.

Figure 1 illustrates 25X enlargements of (A) a freshly grained zinc plate and (B) an oxidized plate showing the gray oxides and initial formation of the white corrosion products. A surface such as that illustrated in Figure 1 (B) is entirely unsuitable for lithography because it is not tenacious, homogeneous, or inert. Anything laying on it—either the image or the etch—is easily removed, especially on the press during the printing. When the oxide is pulled off the plate, areas which are hypersensitive to grease (ink) are exposed and the result is a plate which cannot be kept free of scum.

Protective Treatments

The common and generally recommended means of protecting zinc plates in humid climates has been the application of a coating of gum arabic solution over the plates immediately after graining.¹ While this treatment provides some protection in temperate zones, gum arabic is much too hygroscopic and permeable to moisture to afford any protection at all in the high temperatures and humidities encountered in the tropics. The practice of etching and gumming immediately after graining gives better protection than gum alone, but even this is unsatisfactory under extreme conditions. Inert lacquer and

synthetic resin coatings are also inadequate because their adhesion to the metal is not sufficient for complete protection.

In view of the failure of these treatments and since it is chemically impossible to prevent the oxidation of zinc, the simplest way to eliminate trouble from oxidation is to

control it . . . to chemically convert the surface of the metal to a tenacious, homogeneous, inert film of oxide or other substance which will inhibit the action of temperature, humidity and corrosive elements on the metal. Industry has done considerable research on the chemical treatment of zinc for the protection of galvanized surfaces and the preparation of such surfaces for painting. Two different types of treatments, phosphate and chromate coatings, have been developed and used extensively in commercial applications.

It is not coincidental that most lithographic etches for zinc contain both chromates and phosphates in addition to gum arabic because the protective properties of these ingredients undoubtedly improve the desensitizing action of the etches. Lithography has recognized the value of these treatments without realizing that they held the secret to the complete elimination of oxidation troubles.

A suitable treatment for zinc lithographic plates must satisfy the following requirements:

- The treatment must protect the zinc from oxidation under the most extreme tropical conditions.
 - It must be practical and simple to operate even under field conditions.
 - It must not involve the use of special chemicals or equipment.
 - It must be thoroughly compatible with the lithographic process.
- (Continued on Page 101)

THE CRONAK PROCESS

STEP BY STEP:

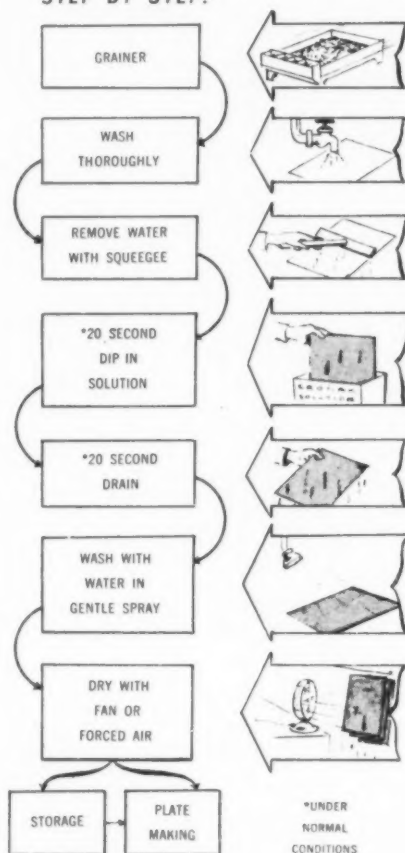
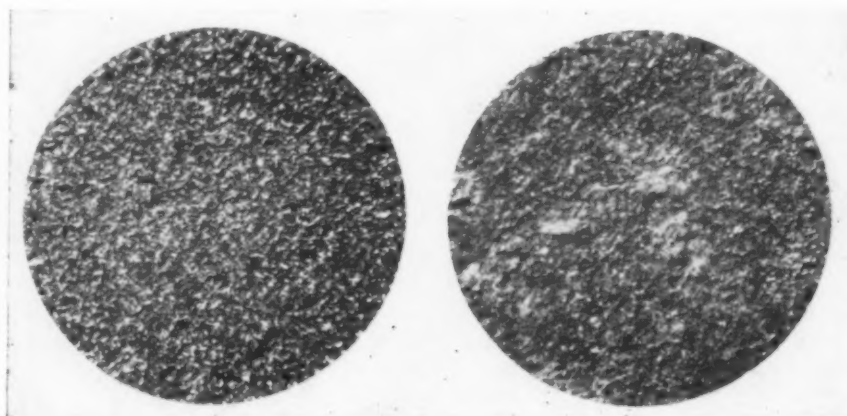


Figure 2. The steps involved in the Cronak process.



A. Freshly grained plate.

B. Oxidized plate.

Figure 1. Photomicrographs of grained zinc (25X).

(1) R. F. Reed and P. W. Dorst "The Albumin Process of Photolithography Lithographic Technical Foundation Research Bulletin No. 6, P. 23."



THERE ARE *No Ink Service* **STATIONS** *on Luzon*

The Story of the Army Engineers Mobile Topographic Units Is an Amazing Tribute to Yankee Ingenuity.
Ink Research Helped to Make Them Work

If you are printing maps on Luzon, in bombed out Europe, in Burma, you cannot pick up the telephone and call an ink service station if something goes wrong on the press. That is why the inks used by the Army Engineer Corps Mobile Topographic Units must be as nearly foolproof as modern research and ink engineering can make them.

IPI makes no claim to helping to win the war because it supplies these inks to the Army—along with other ink manufacturers. However, because of IPI's unique research facilities, its scientific knowledge of ink chemistry and its extensive technical equipment, it was able to offer its services to the Army Engineers and to contribute significantly in setting up accurate standards and specifications.

Early in the war IPI representatives sat down with the Engineers Corps at Plattsburg and later at Ft. Belvoir to help work out the ink problems for the Army's mobile printing units—complete printing plants on wheels. Their objective was to

print new maps every 24 hours showing changes in the combat areas, for an army moving at the rate of 500 square miles a day. In the field the mobile units move according to battle needs. A modern army uses printing in various forms, but most important are maps in large quantities.

In combat operations, officers and soldiers alike must be thoroughly posted on operations. Up-to-the-minute maps are needed on incredibly short printing schedules during the height of combat. Offset lithography was chosen as a rapid method for reproduction and the Army mobile units are playing an important part in our wars.



The IPI approach to the problem was to recommend that, insofar as possible, the ink service problems should be worked out before the inks left the factory. We recommended that accurate color standards be set up and detailed specifications for the inks be written. At first there was some doubt that a specification could be written for ink. It was in this connection that the broad experi-

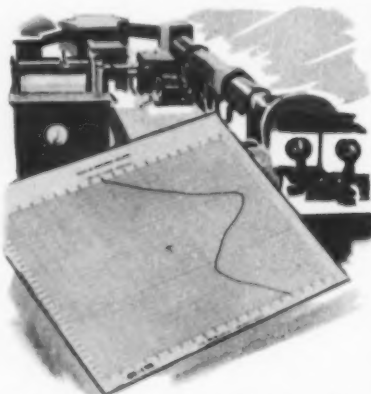


Maps—huge quantities—in 24 hrs. for an army moving at the rate of 500 square miles per day.

ence, scientific knowledge and equipment of IPI Laboratories, factories and technicians played an important part.

Control instruments in these Laboratories include the most modern developments, such as the GE Recording Spectrophotometer, RCA Electron Microscope, Infra-red Spectrograph and the IC Rotational Viscometer, the latter an exclusive development of Interchemical Corporation of which International Printing Ink is a division. IPI's pioneering for accurate color specifications had already resulted in the joint sponsorship by Interchemical and General Electric of the American Standards Association Specification and Description of Color, Z-44, June 14, 1942. Drawing on this experience, accurate color standards and detailed specifications for ink formulations were established. Inks made on these standards and specifications by IPI and other ink companies are as nearly foolproof as scientific research, human skill, and modern manufacturing equipment can make them.

In effect, IPI said to the Army Engineers: "Here are our research facilities. In our belief, they represent the most comprehensive equipment available anywhere for ink research and engineering. They are available for whatever use you want to make of them." The Army Engineers were quick to take advantage of these facilities. Color standards were set up according to Munsell notation as provided in the ASA Standards. Specifications for viscosity, tack, flow,



The GE Recording Spectrophotometer can distinguish differences between millions of colors. The human eye can see only one hundred thousand.

yield value, temperature and other important characteristics were established. The temperature specification itself is interesting. Because the inks must perform in every known climatic condition from the equator to the poles, they must withstand a range from 40° F. below to 160° F. above zero.

The resultant specification, T-1608A, embodies all the necessary information and tests for making inks that will

operate on an offset press far away from the normally convenient ink service station. From an air photograph to a well printed map, mobile units are producing highly satisfactory offset lithography in record time in every combat zone.

IPI TECHNICIANS IN THE ARMED SERVICE

IPI ink technicians are contributing their skill and knowledge in control locations where the programs for these mobile units are perfected. There are 60 IPI men scattered over the many combat zones in all branches of the service. From reports sent in by these men, the performance of the Army Engineers Corps mobile printing units is a tribute to every branch of the graphic arts industry which helped to make them possible. IPI is grateful for the many expressions of appreciation from officers in the service—letters which are restricted and which we cannot publish.

OTHER PROBLEMS—TECHNICAL AND TICKLISH

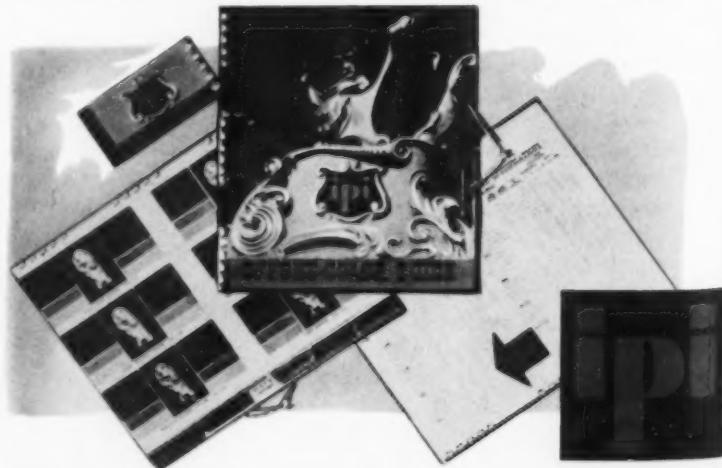
IPI ink engineering has been used on other products for the war. Marking inks for rockets that must not lose their identity as a result of weather conditions and exposure—food can marking inks—inks for duplicating machines and scores of other items, many confidential, which serve to illustrate the complex nature of modern warfare.

IPI LITHOGRAPHIC COLOR GUIDES

IPI has offset color guides, in letter-file and pocket sizes. The inks of which the guide shows specimens are entirely new, based upon scientific investigations made by the Research Laboratories of Interchemical and the Product Development Laboratories of IPI.

Copies of both letter-file and pocket sizes will be sent to you on request. Write to International Printing Ink, 350 Fifth Avenue, New York 1, N. Y.

IPI Offset Color Guides show 114 colors on offset, coated and bond stock, halftone blacks, process inks section, characteristics table and ASA Standards. Arrow points to typical ASA color specification, which reads as follows: Cyan Green OE-120, 497.6, 27.1, 30.8, Munsell 1.5BG, 5.7, 8.8.



The RCA Electron Microscope gives a magnification fifty times greater than that of the strongest light microscope.



WASHINGTON

AFTER last month's sweeping revisions of the orders which control paper manufacture, deliveries and use (ML, April) more amendments were issued later in April on other orders controlling paper.

Paper inventory ceilings for both governmental commercial printing and printers and publishers of greetings and illustrated post cards are fixed at a 50 days' supply, by amendments to Limitation Orders L-340 and L-289, the War Production Board announced April 16.

An amendment to the Governmental Commercial Printing and Duplicating Order L-340 places a limitation on the acceptance of paper for commercial printing ordered by governmental units, by reducing maximum inventory ceilings. Under the amendment all governmental agencies, including Federal, State, county, municipal or local political units, must reduce paper inventories to the new level June 30, 1945, to relieve the pressure on paper mills and suppliers in the second quarter. No change in paper consumption is made, however. The limitation is still 75 per cent of the base tonnage used in 1942, officials of the Printing and Publishing Division explained.

Order L-340 does not affect government units that require less than one ton a year or whose commercial printing costs less than \$1,000 per year. Federal governmental agencies such as the Army, Navy, War Shipping Administration and the United States Maritime Commission are exempt from restrictions of Order L-340 but are subject to all conservation orders of the Director of the Budget.

The order makes it clear that gov-

Latest Capital News Affecting Lithography

ernmental inventory means the aggregate weight of all kinds, grades, sizes and basic weights of paper available for immediate or possible future use. The amendment is similar to recent amendments to the other printing and publishing orders L-241, commercial printing, and others.

The paper and paperboard inventory ceilings of printers and publishers of greeting and illustrated post cards in the second quarter of 1945 was also fixed at 50 days' supply. Restrictions as to usage were not further tightened but remain at 60 per cent of the total paper tonnage used in the base period of 1942, and 50 per cent of the paperboard used in packaging production.

Effective April 16, an amendment to Order L-289, which controls the manufacture and publication of greeting and illustrated post cards, and parts thereof, places the 50-day limitation on the total tonnage of paper, paperboard and boxes for packaging those products. Only 15 per cent of a manufacturer's quarterly quota may be used if carried over into a succeeding quarter under the new amendment.

Notwithstanding delivery and inventory restrictions, a publisher may accept separate items of paper and paperboard in unit quantities by weight, if he accepted similar deliveries in his base period. This pertains when certain types of paper or paperboard were accepted in carload, truckload, 10,000- or 5,000-pound lots or in a unit of four cases, WPB explained.

Order L-259 places new compliance restrictions on paper suppliers, printers, binders, distributors, wholesalers and others, prohibiting them from selling, buying or processing paper materials or cards made in violation of the order. This restriction is similar to those placed on other printers and publishers under their control order.

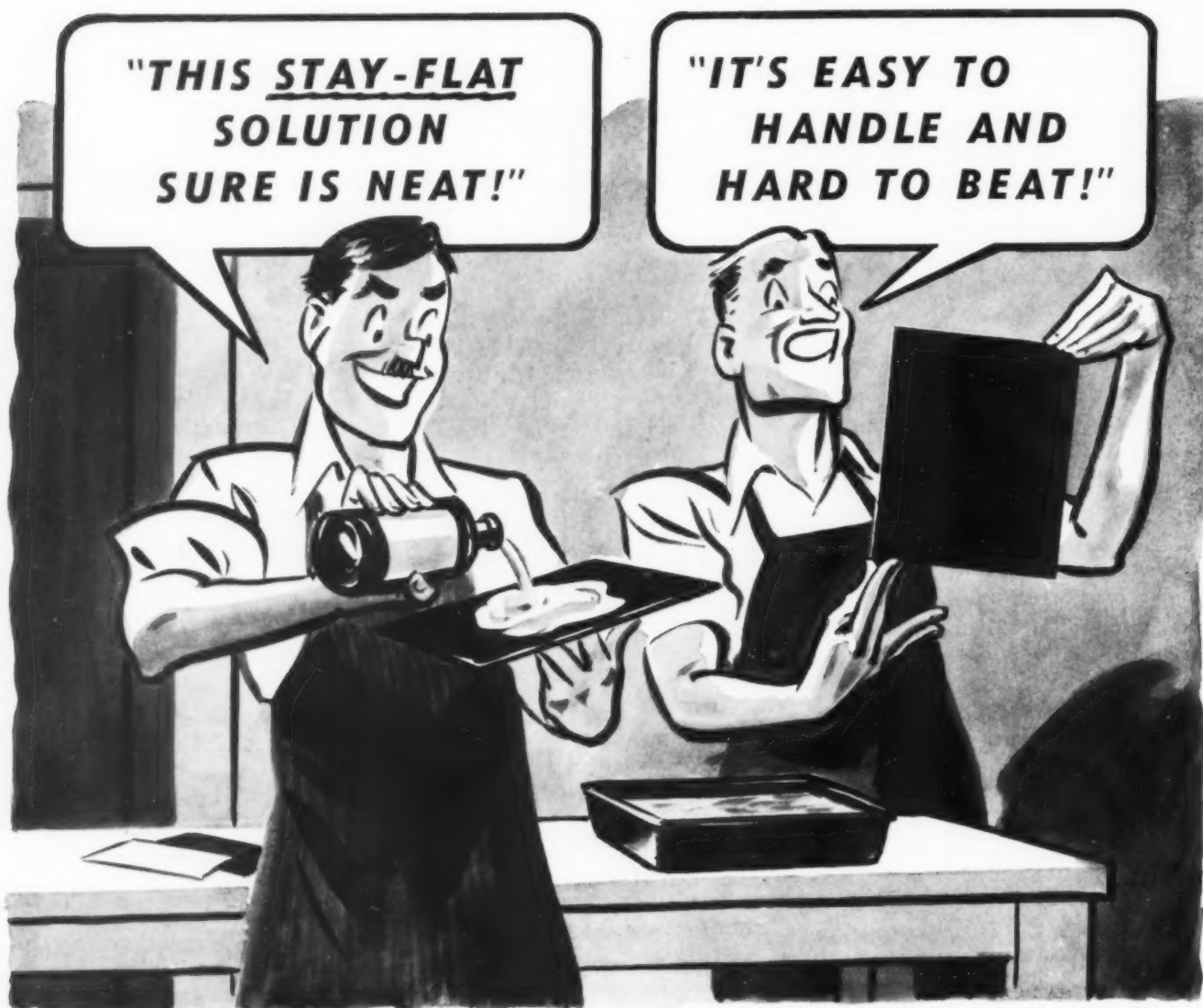
In cases of appeals to the WPB Appeals Board under L-259, Form 3820, in accordance with Priority Regulation 15, is no longer required.

Cover Paper Ruling

The WPB re-emphasized the paragraph in the recent revision of Order L-120 which requires all paper merchants and all purchasers of book, magazine, pamphlet and commercial printing cover papers to furnish their manufacturers or suppliers with a statement that the cover paper purchased will be sold and used only for the production of covers.

Answering requests for an explanation of Paragraph (j)(3) of Schedules I, II and III and the Appendix of Schedule XIV to the standardization paper order, L-120, as amended April 3, Paper Division officials explained the statement "any buyer who resells cover paper may require his customer to give him a similar statement," as follows:

It is within the power of the buyer who resells to exercise the option of the word "may", and insist on the compliance statement if he desires to do so. However, if such a buyer does not elect to require the statement from his customer, he assumes the responsibility for an improper use of the cover paper, having already furnished his manufacturer or supplier a compliance statement with his orders.



ANSCO STAY-FLAT SOLUTION saves you money by saving time—it keeps film flat on glass, with perfect adhesion over a large area. It's simple to use. Stay-Flat Solution is economical, too. And it pours and coats easily on polished glass. You'll like it.



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backs. Ansco Stay-Flat MATTE not only holds the film, but also provides a ground-glass effect for focusing. It's ideal for darkroom cameras that have stationary backs.



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Ansko STAY-FLAT SOLUTION

Bristol Paper

Chemical woodpulp printing Bristol paper, of substance weight 120 pounds may be used by printers and publishers in addition to the 90 and 700 pound paper, WPB reported in a correction to Order L-120 early in May.

In the Paper Division of the Forest Products Division of WPB, Charles J. Dynes of Sorg Paper Co., Middletown, Ohio, has been named chief of the Coarse Paper Division, succeeding Harold O. Nichols.

Paper Predictions Vary

You can take your choice on the paper outlook as "authoritative" opinions range from promises of relief soon after V-E Day, to promises of no relief for three years. The *New York Journal of Commerce* recently put forth the opinion that within eight months to a year after the Skaggearak is cleared so that shipping can move through it from Sweden the U. S. will have pulp supplies adequate to maintain the present high production rate of 17,000,000 tons of paper per year. The *Journal* outlined at some length the reasons for this opinion, weighing the various demands likely in Europe and the various sources of supply. However, it pointed out that demands for paper will continue high and therefore the paper shortage will not suddenly vanish.

Mechanical Bindings

Revocation of restrictions on the use of steel, iron, aluminum and zinc for mechanical and loose-leaf bindings, does not permit their use if prohibited in other orders, WPB said.

Stitching Wire Again Short

Several local associations have called attention recently to a growing shortage of stitching wire in their areas because of a bottleneck in wire-drawing facilities. Lithographers, printers and binders have been called upon to conserve this material as much as possible by returning to some of the measures instituted two years ago, such as using one stitch where possible instead of two, and using glue in cases when wire stitching can be eliminated altogether.★★



IT WAS a pleasure to attend a meeting of lithographers in April, at which current wartime problems were discussed to hear not one word about the paper shortage. Nobody seemed concerned at all about light weight papers, gray papers, slow deliveries of paper, paper quotas, etc., etc. They were tin lithographers.

ml

As a point of information: The metal decorators, among other things, learned the difference between rosin and resin as used in coatings.

ml

Simon G. Nielsen, president of Rainbow Lithographing Co., Cincinnati, was recently elected a member of the Board of Education in that city.

ml

Pfc. Fred Gerlach, former secretary of the Connecticut Valley Litho Club, is now in Germany, according to the CVLC News.

ml

Sam Himmell, president and founder of Baldwin Paper Co., New York, once promoted a prize fight, along with Gus Giegengack, now U. S. Public Printer, and raised \$10,000 for a children's summer camp. This was told in a personality sketch of Mr. Himmell in the May issue of Baldwin's house publication. He founded the company 24 years ago.

ml

Sigmund Ullman Co's bowling team won top place in Chicago Craftsmen's Bowling League tournament which ended late last month. S. U. team's score was 56 games won, 34 lost. Second place went to American Roller Co.'s team with a score of 55 won, 35 lost; third place went to American Coating Mills team, on a 54-36 showing. Places

won by litho houses represented in the line-up were as follows: Butler Bros. litho dept., 12; Workman Mfg. Co., 14; Central Envelope & Lithographing Co., 17; Etchcrafters, (greeting card manufacturers) 18. Among suppliers, places won were as follows: Process Rubber Plate Co., 4; McCutcheon Bros. & Quality, 7; Chicago Litho Plate Graining Co., 9; Sinclair & Valentine Co., 10; E. G. Ryan & Co., 11; H. D. Roosen Co., 15; Martin Driscoll & Co., 16; M. & L. Type-setting Co., 20.

G. Contos of H. D. Roosen Company won individual high game with a score of 266, and individual high series went to E. Mittsch of Butler Bros.' Red Devils team. At a dinner in the Furniture Club, May 5, celebrating the close of the season, twelve individual trophies were presented to team members winning first and second place. Included in the program was a floor show also. Election results will be reported later.

ml

More Bowling—

Edwards & Deutsch Lithographing Co.'s Team No. 1 won top honors in the bowling tournament conducted by Chicago Local No. 4, A.L.A. with a record of 52 games won, 26 lost. Standings of the other thirteen teams in the contest were in the following order: Newman-Rudolph Litho Co.; American Bank Note Co.; R. R. Donnelley & Sons Co.; I. S. Berlin Printing & Lithographing Co., Team No. 2; Collins, Miller & Hutchings; Edward Keogh Printing Co.; Custom Printing Co.; Regensteiner Corp.; Edwards & Deutsch, Team No. 2; I. S. Berlin, Team No. 1; Chicago Litho Plate Graining Co.; Gartner & Bender Co., and I. S. Berlin, Team No. 3.★★

Members of the Edwards & Deutsch team in photo, are (left to right): Louis Schenck, Werner Walther, Charles Timmel, Captain, Joseph Hladik, and Harry Spohnholtz.



(No. 8 of a series on the manufacture of Du Pont Photolith Film)



"Silver" kettle with a glass lining

THIS IS one of a battery of glass-lined "silver" kettles in the Du Pont film plant. Here, in subdued light, accurately determined quantities of silver nitrate crystals purer than "sterling" are made into a solution for the emulsion of Photolith Safety Film.

In total darkness this silver solution is combined with other carefully compounded substances. Timing and temperature are extremely important

... carefully controlled ... and the formula is followed with stop-watch precision. From the glass-lined kettles, semi-finished emulsion is drawn into stainless steel containers and placed in a chilling room where it jells to the consistency of custard pudding.

Throughout these intricate operations, chemists and physicists test each batch of solution to insure a product of superior qualities.

Leading cameramen approve of

Du Pont Photolith Safety Film. They like its high contrast, wide exposure latitude, quick-drying characteristics. It's a film that lies flat ... scribes easily. And modern, light-proof packages for both roll and cut film help prevent waste and do away with the "fumble and grumble" of handling film in the darkroom.

E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware.

DU PONT PHOTOLITH FILM



HELP SPEED VICTORY
BUY AND KEEP
WAR BONDS

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



ABOUT THE TRADE

Meetings Held in Chicago

Several meetings of various lithographic organizations are being held in Chicago the early part of May. The Joint Lithographic Advisory Council was scheduled to meet May 4, 5, and 6, followed by the annual directors meeting of the Lithographers National Association May 7, 8, and 9 at the Edgewater Beach Hotel. The annual meeting of the Lithographic Technical Foundation directors was to be held May 10 and 11, while directors of the National Association of Photo-Lithographers were to meet the same days.

On Saturday May 12, an all day meeting for Chicago area lithographers was planned by the National Association of Photo-Lithographers. Several talks on current industry problems were scheduled as reported here last month.

R & L Corp. Changes Name

R & L Corp., Milwaukee lithographing firm, has changed its name to Arandell Litho Corp., it has announced. In 1936 about 75 per cent of the firm's production was "letter shop" work, and about 20 per cent was black and white offset. In 1944, the company reports that almost 67 per cent of its volume was four or more color process work and about 20 per cent flat color work. The company is located at 2200 North 32 St., and is represented in Chicago by H. Deale Denson, 466 W. Superior St.

Former Metal Decorator Dies

Frank Soderstrom, formerly employed in American Can Co.'s Chicago metal lithographing department, died in Indianapolis, Ind., early last month, at the age of 57 years. He had been with American

Can for 25 years, but when the tin shortage cut production there, obtained a position with Burford Printing & Lithographing Co., at Indianapolis. He was formerly an officer of Chicago Local No. 4, A. L. A.

Retired Lithographer Dies

Hannibal Hamlin Peasley, retired lithographer, died in his suburban home of Flossmoor, near Chicago, April 10, at the age of 84.

Larkin Addresses Apprentices

Robert Larkin, superintendent of the offset department of Jersey City Printing Co., Jersey City, N. J., addressed apprentices of Local No. 1, Amalgamated Lithographers of America at Manhattan Center, New York, April 17. Mr. Larkin discussed lithographic problems of art department, camera, platemaking and pressroom and answered questions asked by those attending. This was one of a series of educational meetings held by ALA.

Coast Firm Produces Trans-Ocean Offset Paper

This is the first issue of the first transcontinental trans-Atlantic newspaper. It is being produced during the San Francisco conference by Guaranty Printing & Lithograph Co., San Francisco, where Fred Teague is in charge of production. Microfilm negatives are flown from London to New York, where the regular Trans-Atlantic edition is offset by Business Letter Service. Business Letter forwards negatives by air to Guaranty for the Coast edition which is also offset.

SAN FRANCISCO SPECIAL



Daily Mail

TRANSATLANTIC EDITION

No. 67

WEEKLY DIGEST, LONDON, WEDNESDAY, APRIL 18, 1945

The Great American

FRANKLIN DELANO ROOSEVELT lies dead on the very threshold of victory.

For longer than any other man in history, his hand was on the American helm.

This greatest of a democracy, this internationalist, this leader of a world at strife yet should the strength to check, to harness, to govern, and finally to turn the forces that threatened America with catastrophe and destruction into forces that created a healthier, saner people.

And this same leadership, inspiring and electric, that radiated from the strong, eloquent voice of every American, brought the empty square of man, Franklin Roosevelt, was confronted with the iron needs of duty.

As the war clouds grew darker, the people of America, tradition and awe led him back to the first office for the drafted Third Term.

None other than the man who had led the Nation through the darkest days of the War—of War—should come.

Franklin Roosevelt at once gave for peace and sought to prepare for war.

He declared a state of emergency, he supported Britain against the Axis as no neutral in history ever supported a cause not his own.

He improved Lend Lease, he sent arms and food, he borrowed the warships he needed against the Axis that he knew America would win.

When Japan struck at Pearl Harbor, America was materially almost as ill-equipped as Britain in 1914—was psychologically ready to fight.

But, with the author of American Victory lies dead, the world is at a loss.

To his wife, to the Roosevelt family, to the American people, to the world, the sympathy of all men is turned.

F. D. Roosevelt—Study in Greatness. See Page FIVE

The King's message

KING GEORGE VI sent the telegram of sympathy to President Truman.

"It is with the most profound regret that I have received news of death of President Roosevelt."

"I hasten to convey to you, England and Wales, my sympathy in this great loss which has befallen Government and people of United States of America."

"This regret will be shared by all my people, who have long since felt that under President Roosevelt's wise and understanding leadership problems of war and of the peace that is to follow were in hands of one who had proved himself to be a man of the highest calibre."

"It is especially grievous that at this moment when the forces of the Axis are bringing to a close the evil which has for so long overshadowed the Continent of Europe the knowledge and wise counsel of President Roosevelt should be taken from us."

Britain's great School Act

has first term

THOUSANDS of children in England and Wales returning from Easter vacation have entered primary schools for the first time. Elementary schools, the name they had before Easter, have ceased to exist.

Secondary schools, which take children above the age of 11, have a longer vacation.

By the summer it is likely that the primary and secondary schools will be having the same name.

The school revolution, the first time since Britain's school system was founded in 1800, came into force in April 1.

Changes, including regrouping of education authorities and the change of name, there will be a longer vacation.

In county secondary schools, however, there are substantial alterations.

The Transatlantic Daily Mail may be obtained weekly, mailed free, for 50.00 per annum, or 51.50 per month.

For details see Page Eight

WAR CASUALTIES OF EMPIRE

The Premier gives list

THE Prime Minister, Mr. Churchill, has given Parliament the figures of British Empire war casualties from the declaration, September 3, 1939, to February 28 last.

They total 1,128,902 made up of—killed, 368,384; missing, 76,872; wounded, 422,476; prisoners, 226,470.

Mr. Churchill also reported that in addition 94,179 British merchant seamen had lost their lives. Interned were 3,592.

Civilian casualties, due to bombing in Britain were 144,542 making a total of 1,273,464.

The details are—

United Kingdom (England, Scotland, Ireland, Wales): Total, 1,128,902; killed, 368,384; missing, 76,872; wounded, 422,476; prisoners, 226,470.

Commonwealth: Total, 1,128,902; killed, 368,384; missing, 76,872; wounded, 422,476; prisoners, 226,470.

India: Total, 1,128,902; killed, 368,384; missing, 76,872; wounded, 422,476; prisoners, 226,470.

Civilian casualties in the United Kingdom due to enemy action over the war period total 144,542. Killed, 22,476; missing, 1,476; wounded, 120,590; and died in hospital, 9,476.

V-Day church help for Europe

Church collections throughout the Empire on V-Day will go towards a fund to help to rebuild Christianity in Europe. It will help to rebuild churches, to help to rebuild the lives of those who have been displaced, and to provide food and shelter.



THE LIFE GUARDS WILL LEAD

BRITAIN'S Life Guards are in full dress now, but the bandstand in full pageantry will lead Britain's Victory Procession. The drummer, above, is pictured in full dress.

V-Day arrangements are going ahead throughout the country. St. Paul's Cathedral bells will peal out over London (reported on Page Three) within an hour of victory being declared.

A great new Union Jack, 300 ft. long, is being specially prepared to fly from Parliament's Victoria Tower.

The Royal Guard of Honour will be in full dress, and the King and Queen will be in full dress.

The Royal Guard of Honour will be in full dress, and the King and Queen will be in full dress.

The Royal Guard of Honour will be in full dress, and the King and Queen will be in full dress.



GODFREY ROLLER COMPANY

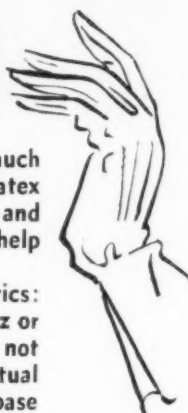
WILLIAM P. SQUIBB, President

211-217 N. CAMAC ST.

PHILADELPHIA 7, PA.



PULL ON LIKE A STOCKING - - FIT LIKE A GLOVE



The use of seamless tubing does away with much waste in the covering of dampening rollers. Aquatex and Dampabase are patented fabrics designed and introduced by Godfrey Roller Company to help solve the problems of dampening control. Among the outstanding advantages of these fabrics: No seams to induce streaking, they throw no fuzz or lint, they are of uniform thickness and will not creep, may be washed on or off the rollers. Actual experience in plants using Aquatex and Dampabase shows an increase in the average life of rollers up to 100 per cent.



- 1 Everything that is required: a roll of material, a metal tube, scissors, needle and thread.
- 2 Cut Aquatex or Dampabase to length. Thread it completely through the tube. Turn it down over the outside edge of the tube.
- 3 The transfer tube with the material placed over it.
- 4 Place the transfer tube over the roller. Then, holding the Aquatex or Dampabase on one end of the roller, slide the tube off the other end of the roller.
- 5 Cut off excess material and sew other end.

Covering time, less than 3 minutes

GODFREY ROLLER PRODUCTS

COMPOSITION ROLLERS

the best composition roller for fine printing results

RUBBER ROLLERS

the roller for newspaper, offset, water color, or general printing

VULCANIZED OIL ROLLERS

the rollers for offset lithography and letterpress distribution

AQUATEX

the most widely used seamless dampening cover on lithographic presses

DAMPABASE

the resilient undercover for lithographic presses

TABLETINE

the padding glue which sticks and holds

LEATHER ROLLERS

GRINDING AND POLISHING

all types of rubber, vulcanized oil and leather rollers

"RED HEAD" COATING COMPOSITION

MAKE-READY PASTE

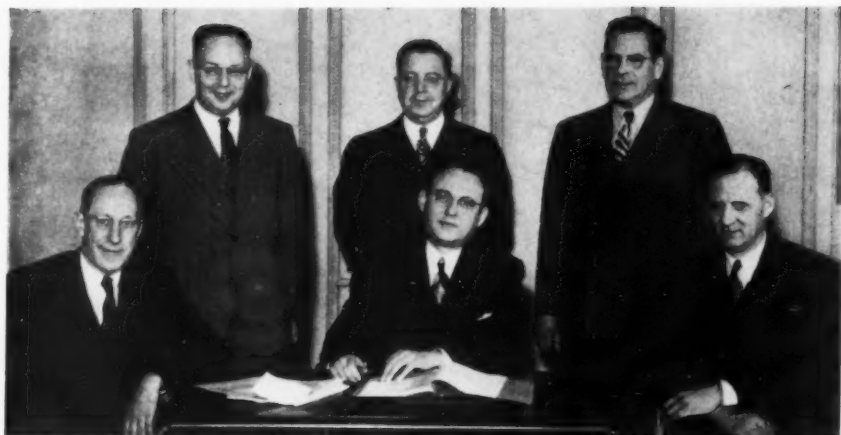
TYPECLEAN AND BLANKET WASH

PAD TEX

the cold padding cement.

Distributors throughout the world

ROLLER MAKERS FOR 80 YEARS Lithographic — Composition — Newspaper — Varnish — Lacquering — every kind of roller required for good printing and lithography.



Three Chicago litho plants are represented among the new officers of the Graphic Arts Association of Illinois, they being president, 2nd vice president and treasurer. Seven members of the Association's Board of Directors are also from offset firms, Secretary S. F. Beatty stated. Altogether 41 members of the Illinois association operate offset equipment. In the photograph are the following officers:

Standing, left to right: third vice president, John F. Snider, Logan Printing Co., Peoria, Ill.; second vice president, Walter H. Nelson, Rand McNally & Co., Chicago; first vice

president, Eagle Freshwater, Western Newspaper Union, Chicago. Seated, left to right: secretary and general manager, S. F. Beatty; president, Carl E. Dunnagan, The Inland Press, Inc., Chicago; and treasurer, W. H. King, Stationery Mfg. Co., Chicago. Offset representatives on the board include Otto E. Bull, Workman Mfg. Co.; Calvin D. McKay, Shattock & McKay Co.; Ivan A. McKenna, R. R. Donnelley & Sons Co.; John T. Moran, Gunthorp-Warren Printing Co.; R. B. Nelson, Magill, Weinsheimer Co.; Theodore Regensteiner, Regensteiner Corp.; Harry O. Kovats, Runkle-Thompson-Kovats, Inc.

First Okinawa Paper is Offset

The first English language newspaper to be published on Okinawa Island on Japan's doorstep was produced by offset lithography April 29, according to a dispatch to *The New York Times*. It is called the Gunto (Archipelago) Graphic, "for, by and about the 24th Army Corps". Of the paper, *The Times* says, "It is an informative, lively newspaper, with good war maps, pencil sketches of Okinawans in the civilian collection camps and, inevitably, a pin-up girl."

"The Page One banner line says 'German Army Is Shattered.' On page one is a picture, and a well-written story on the purposes of the San Francisco Conference."

300 Attend Chicago Meeting

Over 300 Chicago printers and lithographers turned out for the annual "Offset Night" program of the Chicago Club of Printing House Craftsmen April 17. Guest speaker was E. E. Jones, president of Graphic Arts Corporation of Ohio, Toledo, O., who devoted his talk to metal alloy plates and other developments to which the graphic arts can look

forward in postwar days. A feature of the program was the Miehle Printing Press & Mfg. Co. motion picture showing the new offset press. An exhibit showing how offset plates are produced and the small working model of an offset press also attracted much attention.

Brazilian Tours Chicago Plants

Curt W. Reichenbach, Brazilian lithographer, inspected some of Chicago's larger lithographing plants last month on a tour which is taking him to various printing centers throughout the country. Mr. Reichenbach, who represents Companhia Lithographica Ypiranga at Sao Paulo, said his company, which is 15 years old, is the largest in Brazil and is making plans to become still larger. Currently, they have had "more business than we can handle" he stated, and, as postwar prospects are bright, he is getting ready for the needed expansion by familiarizing himself with American equipment and American methods. New presses, rollers, ink, plates, cameras and other items were all among the matters of particular interest to him.

Capt. Montfort, NAPL Counsel, Dies

Capt. Louis B. Montfort, 61, counsel for the National Association of Photo-Lithographers, and active in other graphic arts groups, died April 6 at Doctor's Hospital, Washington. In 1933 Capt. Montfort, with Col. W. W. Kirby and Paul Heideke, formed the NAPL.

Capt. Montfort was a graduate of the Law School, University of Michigan. Class of 1908, and practiced law in Milwaukee, until the outbreak of World War I, when he became a member of the U. S. Air Corps. After the close of the war, he was with the Judge Advocate General's Department of the War Department until 1923, when he retired from the Army and entered the private practice of law in the District of Columbia. At the time of his death he was secretary and general counsel of the Crown Manufacturers Association of America, general counsel of the NAPL, secretary and general counsel for The Graphic Association, and also represented other trade associations in Washington.

YLA Hears Hodder

Clifford E. Hodder, executive secretary of the Point of Purchase Advertising Institute was scheduled to address the Young Lithographers' Association of New York, May 9, on the subject, "Window Display as an Advertising Medium, and its Relation to the Lithographer".

Kaumagraph Elects Secretary

Mrs. Frances Haskell Allmond, former assistant secretary of the Kaumagraph Co., Wilmington lithographers, was recently elected secretary and a director of the company.

It's Rayner, Dalheim & Co.

A. Rayner, who was recently named to the executive committee of the National Music Printers and Allied Trades Association, is connected with Rayner, Dalheim & Co., Chicago, and not Dalheim & Co., as reported in *Modern Lithography* in March.



THE conclusion of the European phase of World War II leaves our armed forces and the suppliers of their needs and the needs of a civilian war economy with a big job still to be done. Victory over Japan will be a costly one — on the home front there must be no easing up until our boys are on their way home from the Pacific.

Throughout the war Charlton's unrivaled bindery facilities have made it possible to turn out many important jobs related to the war effort. In spite

of difficult conditions this work has been done speedily and efficiently.

This record of service has been accomplished with a minimum of inconvenience to the normal bindery needs of lithographers. Rather than throw up our hands we accepted the challenge to our ingenuity presented by war conditions and proved that modern facilities and experience could solve most problems.

Call in Charlton on your next binding job. You will be sure of a sympathetic ear and a sincere effort to serve economically and efficiently.

SUPPORT THE MIGHTY 7th WAR LOAN

F. M. Charlton Co.

BOOKBINDERS

345 HUDSON STREET



NEW YORK 14, N. Y.



Litho Firms Among First to Get GPO Awards

THREE lithographing firms were among six companies in New York to be honored during April by the new award of Certificate of Merit given by the Government Printing Office. These firms were Oberly & Newell Lithograph Corp., Acweltone Corp., and Pace Press. These awards, which are the highest honor given to printing or lithographing plants by the government in recognition of

their war production, were the first to be made under the recently announced GPO plans. "The award," said A. E. Giegengack, public printer, "is a recognition of printers by printers. You have been selected by men who know what your problems are and what your achievements are." The awards were made to the various plants by GPO representatives with appropriate ceremonies.

Foto-Lith Changes Name

The name of Foto-Lith, Inc., Cincinnati, has been changed to Cincinnati Lithographing Co., Inc., Harry Brinkman, president, announced April 15. The company announcement telling of the change said, "This change in name is in keeping with our policy of progressive advancement and postwar expansion. We feel the new name to be more descriptive of the versatile field of operations achieved through unprecedented development in the lithographic industry."

This change follows an expansion of the company a year ago when it purchased the Eagle Lithographing Co., and the Cincinnati Lithographic Co., and merged them with Foto-Lith.

Office and plant of the company are still located at 38 West McMicken Ave.

Former Pressman Killed in Action

Associates of Staff Sgt. Charles Chambers at the I. S. Berlin Printing & Lithographing Co., Chicago, where he was formerly employed as a pressman, have learned that he was killed in action in France last November.

Cuts Back Shell Order

War Department orders issued last month cutting shell production affected Litho Equipment & Supply Co., Chicago, which has been executing a contract for M-54 fuses for rocket bombs. Although this contract

was cut back 50 percent, L. S. West stated that the company is still occupied 100 per cent in war work and will be for some time. He saw no immediate prospect, he told *Modern Lithography*, that former civilian services to the litho trade can be resumed for months to come.

Pittsburgh Tin Decorating Moves

Moving of the entire plant and installation of some new equipment was begun during April by the Pittsburgh Tin Decorating Co., Pittsburgh, Walter C. Kammerer, general superintendent, stated. The company is moving from 401 Amberson Avenue, to a modernized building at 7515 Thomas Blvd., where 32,000 square feet of floor space will be utilized. Some of the equipment in

the new plant will be new, although no new presses are being installed at present. The new plant will provide more efficient arrangement of equipment, Mr. Kammerer said. The new plant is expected to be in operation by June 1.

Litho Club Visits Monsen Chicago

The Lithographers Club of Chicago devoted its April 26 meeting date to a tour of the newly modernized and enlarged typographic plant of Monsen Chicago. Assembling early at the Monsen place, 22 E. Illinois St., the crowd enjoyed a buffet dinner and then, piloted by Myron Monsen, Sr., his two sons and other company executives, visits were made to the various departments where all operations were explained with special attention to features of particular interest to lithographers. Gathering then in the conference room, a short illustrated discussion of type was held. Visitors commented on the modern interior and up to date facilities.

WPB Charges Paper Overuse

Red-Mar Press, Inc., Toledo, O., during April, was charged with using paper beyond its quota during 1943 and 1944. The firm was ordered by the War Production Board to use 18½ tons less paper during the second quarter this year.

The 1945 offset estimating class conducted by the Graphic Arts Association of Illinois in Chicago completed its course of study April 19, after sixteen weekly sessions under the leadership of Arthur A. Steube, produc-

tion manager of the Cuneo Press, Inc. In the photograph (below) of the class in session at the association's assembly room, 105 West Monroe St., Mt. Steube is shown demonstrating a problem on the blackboard.





STABILIZED ALBUMIN SOLUTION

... a stabilized solution of hen-egg albumin carefully selected and standardized for lithographic purposes.

It is always fresh, free from impurities and uniform in density and pH value.

SINVALCO Albumin Solution can be used on either zinc or aluminum plates and on all types of grain ... It is necessary only for the operator to add dichromate sensitizer (furnished with each package) and the required amount of water to produce a superior plate coating solution.

Let us demonstrate to you in your own plant the many advantages of using SINVALCO Standardized Chemicals ... Write, wire or phone the nearest Sinclair & Valentine plant today ...

S E R V I C E F R O M C O A S T T O C O A S T

Sinclair and Valentine Co.

Main Office and Factory: 611 West 129th Street, New York City

Albany Birmingham Charlotte Cleveland Dayton Havana Kansas City Mexico City Nashville New Orleans San Francisco
Baltimore Boston Chicago Dallas Detroit Jacksonville Los Angeles Miami New Haven Philadelphia Seattle

SINVALCO *Ready to Use* STANDARDIZED CHEMICALS

SINVALCO Solution No. 1
Deep-Etch Coating Solution
(Ready Mixed)

SINVALCO Solution No. 1
(A and B)
Deep-Etch Coating Solution

SINVALCO Solution No. 2
Stopping-Out Shellac

SINVALCO Solution No. 3
Deep-Etch Developer

SINVALCO Solution No. 4
Deep Etching Solution for Zinc

SINVALCO Solution No. 5
Deep Etching Solution for
Aluminum

SINVALCO Solution No. 6
Lithotine Concentrate

SINVALCO Solution No. 7
Deep-Etch Lacquer

SINVALCO Solution No. 8
Developing Ink

SINVALCO Solution No. 9
Lithotine Asphaltum

SINVALCO Solution No. 10
Stabilized Albumin Solution

SINVALCO Solution No. 11
Litho-Kleen Concentrate

SINVALCO Solution No. 12
Plate Etch for Zinc

SINVALCO Solution No. 13
Plate Etch for Aluminum

SINVALCO Solution No. 14
Fountain Etch for Zinc

SINVALCO Solution No. 15
Fountain Etch for Aluminum

SINVALCO Solution No. 16
Stabilized Gum Solution
Lithotine

Rossotti, Deviny Address Washington Litho Club



Alfred F. Rossotti, Rossotti Litho Co.



John J. Deviny, Deputy U. S. Public Printer

IN the first formal meeting following election and installation of officers, the newly organized Washington Litho Club packed in 280 members and guests April 23 to hear talks by John J. Deviny, Deputy Public Printer of the U. S., and Alfred F. Rossotti, president, Rossotti Lithographing Co., North Bergen, N. J.

Speaking on the subject, "Competitors Can Cooperate" Mr. Deviny drew from his experience of many years in the graphic arts and his service as vice president of the United Typothetate of America and as president of the International Association of Printing House Craftsmen, as well as from his present position in the Government Printing Office.

Mr. Rossotti, who is a past president of the Litho Club of New York, took as his subject "Suggested Controls in Litho Techniques and Practices", and discussed the importance as well as the method of controlling every operation in the lithographic process from copy through the press-room. He also commended the work of the Lithographic Technical Foundation in establishing standard methods and controls.

The meeting was held at the Continental Hotel, and was presided over by William W. Heintz, Williams & Heintz Co., club president.

At the club's meeting Monday May 28, Joseph Machell, press superintendent of the Rochester plant of Stecher-Traung Lithograph Corp., is to be the speaker.

Craftsmen Add Two Lithomen

Leo Wilewski, foreman, litho art department of Offset Fine Arts, and Edgar L. Huelers, foreman, platemaking department, Poole Bros., Inc., were among a class of new members admitted to the Chicago Club of Printing House Craftsmen at the April 17 meeting. Among associate members taken in were Fred A. Lindahl, production manager, American Printing Ink Co., and W. E. Rutinberg, assistant sales manager, J. M. Huber, Inc.

To Make Stainless Steel Plates

A full line of processed stainless steel plates for offset, letterpress and gravure printing is planned for production by the Coloron Graphic Plate Company of Toledo, Ohio. This firm, recently formed by the Coloron Corporation of Albany, N. Y., will function as a division of the Graphic Arts Corporation of Ohio.

Due to war restrictions and a still critical shortage of stainless steel, initial production will be limited to the new all-metal stainless plano-

graphic master, comprising a metallic oxide printing image. The release of these plates will be confined to strictly war purposes.

Coloron has already announced the formation of its Canadian manufacturing unit, The Coloron Corporation Limited, Toronto, Canada. Manufacturing operations have already commenced upon a limited scale, and will be stepped up just as fast as stainless becomes more available for civilian use.

Release Mechanical Bindings

General Binding Corp., Chicago, recently has announced that two mechanical bindings are available either with or without priorities. These bindings are known as Cercla, a metal mechanical binding, and Cerlox, a plastic mechanical binding. The company has been engaged in manufacturing these and other types of mechanical bindings for the use of the armed forces for instruction manuals and other types of books. The completion of a large part of this army and navy work now makes it possible also to produce these bindings for civilian use, the company states.

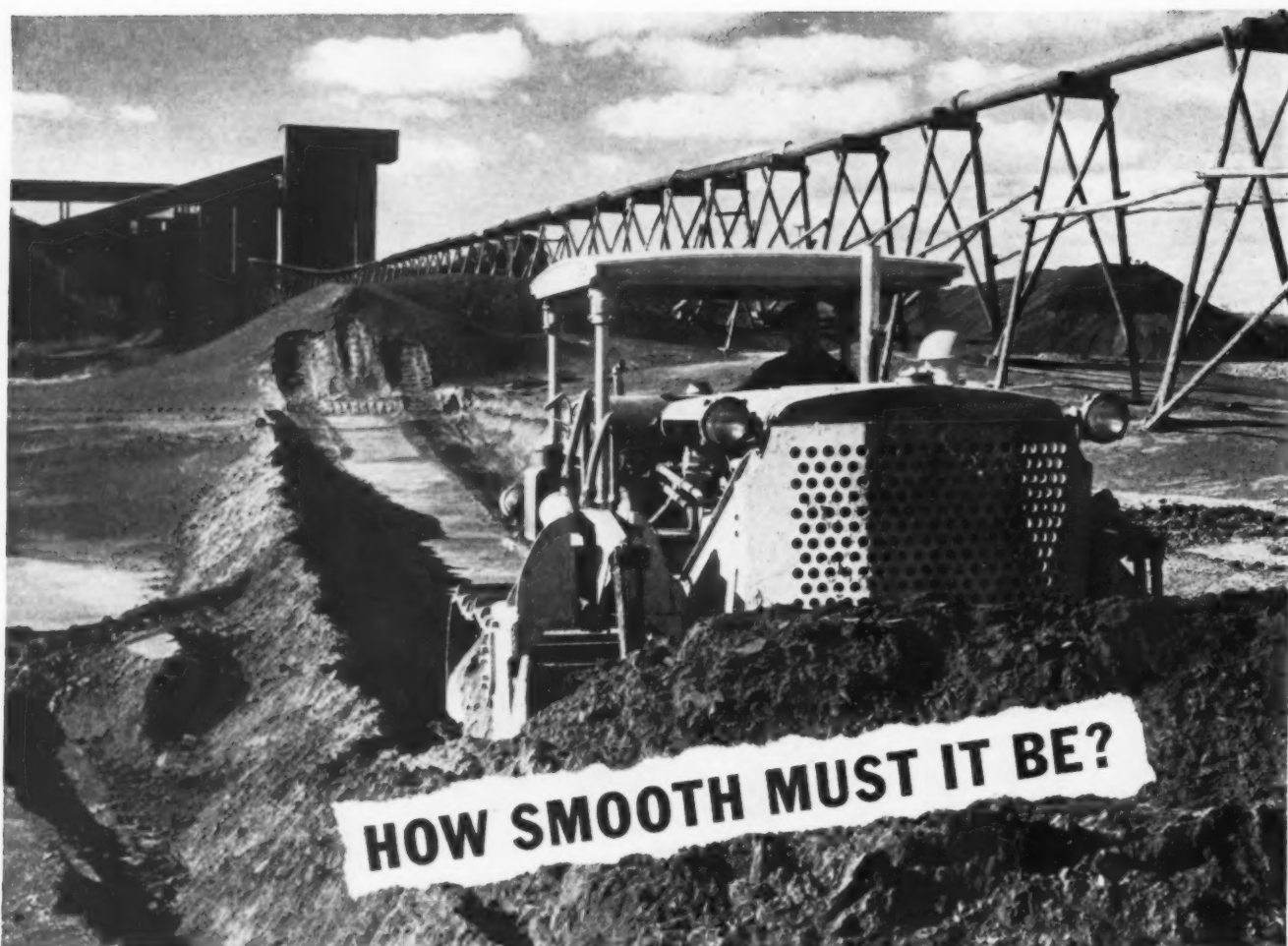
These bindings allow book pages to lie flat and provide full visibility of reading matter and illustrations on every page. New pages can be added to books bound in this way, the company states.

Dunnagan Addresses Guild

Carl E. Dunnagan, head of Inland Press, Chicago combination shop, and president of the Graphic Arts Association of Illinois, was guest speaker at the meeting of the North Side Printers Guild in Chicago April 10. His subject was "Printers' Problems—Current and Post-War."

Brown Paper Moves N. Y. Office

The New York office of L. L. Brown Paper Co. has been moved from 261 Broadway to 41 Park Row, the company announced during April. E. C. Chadwick remains in charge. The company's home office is in Adams, Mass.



HOW SMOOTH MUST IT BE?

The bulldozer is a marvelous machine. It does a smooth job in leveling earth.

Bingham Litho-Offset rollers, too, must do a smooth job. They must be efficient, long lasting and positive. They must level ink microscopically, and at the same time pick up foreign particles or substance that might mar the final job. They must do a double duty seemingly of direct opposites. And they cannot back up for another try.

There is no need to risk unproductiveness. You can insure proper production from your presses with Bingham's **SAMSON** Offset Rollers, or Bingham's **LITHO-PRINT** Offset Rollers. There is a Bingham representative convenient to you. You can depend upon him for help on any roller problem.

SAM'L BINGHAM'S SON MFG. CO.

Roller Makers Since 1847

Manufacturers of Printers' and Litho-Offset Rollers

CHICAGO 5

Atlanta 3
Cleveland 14
Dallas 1

Des Moines 2
Detroit 10
Houston 6

Indianapolis 2
Kalamazoo 12
Kansas City 6

Minneapolis 15
Nashville 3
Oklahoma City 6

Pittsburgh 3
St. Louis 2
Springfield, O.

Milwaukee-Racine Craftsmen Library to Expand



Interior of the Milwaukee-Racine Club of Printing House Craftsmen Technical Library located at the Knickerbocker Hotel, Milwaukee, showing a portion of the several hundreds of technical books and publications covering every phase of the graphic arts. Plans for expansion are being made because of an additional contribution by Elmer Voigt to the library endowment fund which he originated. Left to right are: Walter Zahn, assistant librarian; Carl Becker, librarian; E. E. Radloff, and H. Van Wingan, trustees. The library is now open several evenings each week.

U. S. P & L Re-elects

Gen. William Ottman was re-elected chairman of the board of U. S. Printing & Lithograph Co., Norwood (Cincinnati), Ohio, recently. Other officers named are Joseph P. Thomas, president; H. Langelutteg, W. E. May, A. C. Saylor and William H. Walters, vice-presidents; John M. Callahan, secretary; Justus Schueler, assistant secretary and treasurer, and R. E. Welch, controller.

Murphy Heads Fund Drive

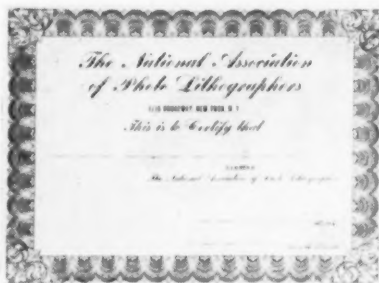
The Graphic Arts Group, headed by James L. Murphy, secretary-treasurer of the Consolidated Lithographing Corporation, for the second time, is one of the first to complete its organization for the 1945 campaign of the Greater New York Fund, it was announced by Arthur H. Motley, chairman of the Professional Section.

Chairmen of the 13 divisions comprising the group met at Mr. Murphy's invitation late in April at the Lotus Club, to complete plans for the industry's participation in this year's appeal.

Last year, under Mr. Murphy's direction, the group substantially topped its quota, contributing a total of \$30,966 to the fund.

Chairmen of some of the divisions are: letter shops, William M. Beresford, James Gray, Inc.; lithographers, Charles P. Schmid, president of Trautman, Bailey and Blampey; printing inks, Anthony J. Math, Sinclair and Valentine Co.; and printing machinery, C. P. Titsworth, Miehle Printing Press and Manufacturing Co.

New NAPL Certificate



This is a newly designed certificate of membership adopted by the National Association of Photo-Lithographers. The certificates which measure approximately 7 x 10" were lithographed by Cincinnati Lithographing Co. (formerly Foto-Lith, Inc.)

Announce LNA School Winners

Winners in the Sixth Annual Lithographed Publications Competition sponsored by the Lithographers National Association in connection with the 21st Annual Contest of the

Columbia Scholastic Press Association, were recently announced.

Awards were based on the following points: galley preparation; galleys per page; justification of columns; original art work; halftone illustrations; advertisements, etc.; general arrangement; reduction of type; margins; lines—proper use and weight; paste-up and corrections; gutters, and a bonus for taking full advantage of the versatility of the lithographic process.

One copy of each lithographed (planographed, offset, photo-offset, photolithed, etc.) elementary, junior high school and senior high school newspaper and magazine eligible for the contest was submitted to a committee appointed by the LNA, special awards being presented to publications placing highest in the competition.

The winners are as follows: Group I—Elementary School Newspapers, First Honor, *The Daze*, Stamford, Conn.; Second Honor, *The Springdalian*, Springdale, Conn.; Third Honor, *Emmet City News*, Chicago, Ill. Group II—Junior High School Newspapers, First Honor, *The Tattler*, Upper Darby (Brookline), Penna.; Second Honor, *Burdick Times*, Stamford, Conn.; Group III—Senior High School Newspapers, First Honor, *The Siren*, Stamford, Conn.; Second Honor, *Blue and White*, All Hallows, Bronx, New York. Group IV—Elementary School Magazines, First Honor, *The Gondolier*, Evanston, Ill.; Group V—Junior High School Magazines and Senior High School Magazines, First Honor, *Latin School Register*, Boston, Mass.; Second Honor, *Argosy of Commerce*, Ottawa, Canada.

Printers' Group Progresses

Final details of the merger of the United Typothetae of America and the Joint Committee on Government Relations of the Commercial Printing Industry are now being completed. The UTA adopted the by-laws revision and a special meeting of UTA membership is to be arranged for formal approval. The name of the new organization is to be Printing Industry of America, Inc.

TODAY'S BEST BUY IN *Paper*



IS A U. S. WAR BOND!

In the face of mounting victories it is only natural for us to relax a little. We forget for the moment that blood is still being shed . . . lives still being lost . . . dollars still being spent at the rate of millions per day to clinch the Final Victory.

If your optimism has reached this danger point

. . . if your concern over converting to peacetime business has outsped your sense of responsibility to the men who still must fight and die to make peace possible—glance carefully at the casualty lists in your evening paper. And then buy . . . buy to the very limit of your resources . . . the War Bonds which are needed to buy Victory and Peace for all of us.



SORG STOCK LINES: White Sorex • Cream Sorex • Equator Offset • Equator Index Bristol • Valley Cream Post Card • Middletown Post Card • No. 1 Jute Document • Buckhide Tag • **For Converting Use:** DBL (Double Bleached Lined) • DIP (Dyed-in-pulp)

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MEMBER: Miami Valley Paper Shippers Association

OFFICES: New York Office: 370 Lexington Ave. (17) Chicago Office: Daily News Bldg. (6)

REPRESENTATIVES: BOSTON, C. H. Dodge, 10 High Street (10). LOS ANGELES, N. L. Brinker, 409 E. 2nd Street (12). ST. LOUIS, H. E. Bouis, Ambassador Bldg. (1).

Cutright Becomes Hoe President

Harold G. Cutright (below) has been elected president of R. Hoe & Co., Inc., New York press and ma-



Harold G. Cutright

chinery manufacturers, succeeding Harry M. Tillinghast, who has been elected to the newly created office of chairman of the board, the company announced in April. Mr. Cutright has been vice-president and general manager of the press division of the company since October, 1944. Prior to joining the Hoe organization, he was a director and vice-president of Standard Brands, Inc., while during the years 1939 to 1942 he was assistant to the vice-president and treasurer of the Minneapolis Honeywell Regulator Co. From 1932 to 1939, he held executive positions with National Dairy Products Corporation, previously to which he had been assistant to the president of Albert Pick-Barth Co. and vice-president of the John Van Range Co.

Mr. Tillinghast, who first became associated with Hoe in 1910 and who has been its president since April, 1939, for many years has been in the graphic arts industry, particularly as it relates to printing press machinery and allied equipment. He also has been an active leader in the Army Ordnance Association and is at present the first vice-president of the New York Post of this organization. He is director of the Bronx Board of Trade as well as of the China-America Council of Commerce and Industry, Inc.

MAY, 1945

At the annual stockholders meeting of the Hoe Company, Mr. Cutright, Harry K Barr and Vandiver Brown were re-elected directors to represent the Class "A" holders for a three-year term, while Arthur I. Hoe and Albert C. Simonds, Jr., were re-elected directors to represent the common stock for a one-year period.

Mr. Tillinghast, in his remarks to the stockholders, stated that the company's sales in the first six months of its fiscal year had substantially exceeded the comparable period of last year, with March representing the largest month in history from the standpoint of actual shipments. The company's manufacturing facilities continue to be devoted exclusively to the production of vital ordnance material, he said.

Triples Fuse Can Output

Continental Can Company tripled its output of bomb fuse cans during 1944 as compared with 1943, according to J. F. Egenolf, vice-president in charge of manufacturing. These cans are produced in the same plants that formerly made metal containers for civilian food and other products.

The cans come in many sizes; they are all key-opening, and have metal collars fixed inside to hold the fuses snug. It is estimated by the Continental Company, that fuses packed in these hermetically sealed containers will keep in good condition for 20 years.

Continental Can Company was one of the first and today claims to be the largest manufacturer of bomb fuse cans. Seven Continental plants are now engaged in this work.

Ideal Appoints Lohr

Ideal Roller & Mfg. Co., Chicago, has announced the appointment of Marvin Lohr as sales representative in the Detroit territory. He will be Ideal's first permanently located salesman in this area, his address being 18418 Blackmoor St. Detroit, 5. Further plans are being made, the company stated, for gradual expansion of the field staff to pre-war proportions by other appointments.

MacMillan Speaks at Baltimore

Commander Donald B. MacMillan, U. S. Navy, noted arctic explorer and lecturer, addressed a crowd of nearly



Commander D. B. MacMillan

100 lithographers at the April 16 meeting of the Litho Club of Baltimore. Taking as his subject "Pioneers in Arctic Explorations," Commander MacMillan presented motion pictures and slides on his expeditions and told of his experiences during many years in the perpetually cold regions.

Commander MacMillan has been on duty with the Hydrographic Office of the navy which has charge of compiling information and lithographing charts used by U. S. ships all over the world. He was scheduled to retire from active service the day before his Baltimore appearance, and has planned new explorations.

The meeting was held at Hotel Emerson, where another meeting is scheduled for Monday, May 21. At this meeting, O. M. Curtis, Jr., of S. D. Warren Co., Boston, is to speak on "The Case for Coated Paper for Lithography." Mr. Curtis has been a speaker at several national lithographic conventions, and has been in charge of the offset division of the Warren company for 17 years.

Photochrome Moves

Photochrome Colorprint Laboratory, producers of art copy prints from Kodachrome, recently moved to larger quarters at 346 North Fairfax Ave., Hollywood 46, Calif.

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Lithographed in 4 colors

WARREN'S Cumberland Offset

► PRE-CONDITIONED ◄

WOVE & SPECIAL FINISHES

Postal regulations prohibit sampling of paper in this publication, therefore Cumberland Offset is not used for this insert.
Sample Book of all finishes of Warren's Cumberland Offset may be secured from your Warren merchant.

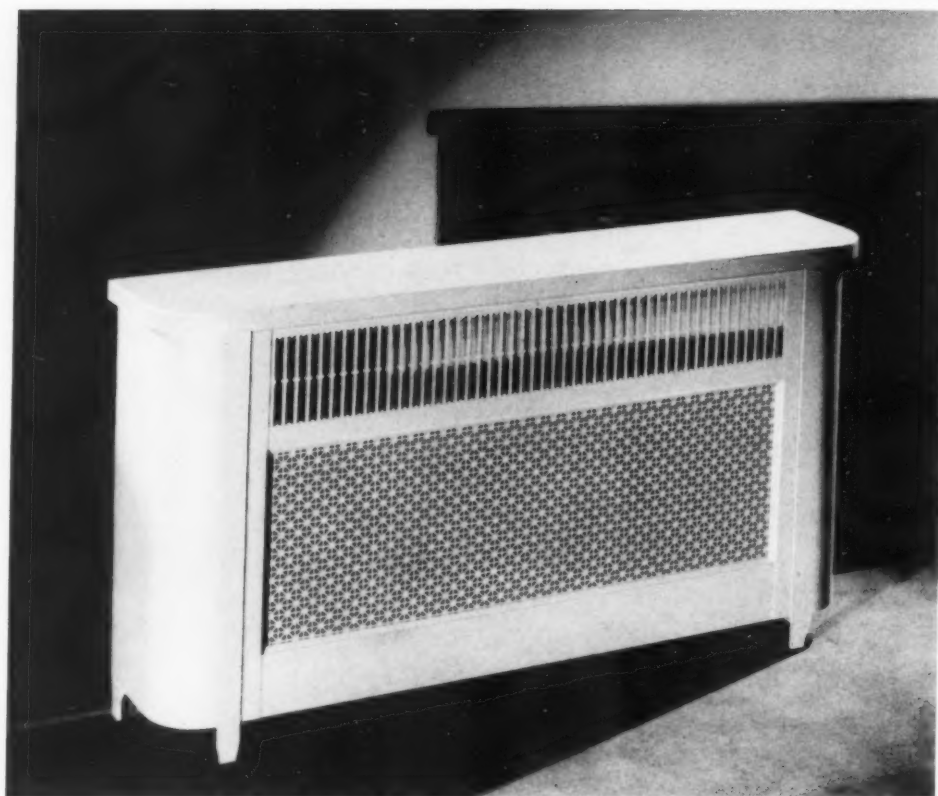
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BOISE, IDAHO	Zellerbach Paper Company
BOSTON, MASS.	Storrs & Bement Company
BUFFALO, N. Y.	The Alling & Cory Company
CHARLOTTE, N. C.	Caskie Paper Company, Inc.
CHICAGO, ILL.	Chicago Paper Company
CINCINNATI, OHIO	The Diem & Wing Paper Co.
CLEVELAND, OHIO	{ The Petrequin Paper Company
	{ The Alling & Cory Company
COLUMBUS, OHIO	The Diem & Wing Paper Co.
DALLAS, TEXAS	Olmsted-Kirk Company
DENVER, COLO.	Carpenter Paper Co.
DES MOINES, IOWA	Western Newspaper Union
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FORT WORTH, TEXAS	Olmsted-Kirk Company
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	The John Leslie Paper Company
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WARREN'S Cumberland Offset

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WOVE • SAXONY • HOMESPUN • LINEN • HANDMADE

WARREN'S Cumberland Offset is *pre-conditioned* by the exclusive process that has been used successfully on Warren's Label papers. Under average pressroom conditions, both winter and summer, Cumberland Offset may be run directly from the case or skid without further conditioning by hanging.

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Printing Papers

Philadelphia To Honor Past Presidents May 28

SIX past presidents of the Litho Club of Philadelphia are to be guests of honor at "Past Presidents' Nite" of the club Monday, May 28, at the Poor Richard Club. The principal speaker is to be Walter A. Kaiser, Edward Stern & Co., who preceded the club's present head, William Stevens of the same company, now holds the office of president. Other presidents of the club include Anthony Capello, Jos. Hoover & Sons, the club's first president; Charles Geese, Cuneo Eastern Press; Ken Whitecar, Alpha Litho Co., Camden; William Jensen, Dando Schaff Printing & Publishing Co.; and Herman Hanselman, Penn Lithographing Co.

At the club's April 23 meeting, a service symposium was held with two speakers discussing service and maintenance of presses and other lithographic equipment. Al Eaton, manager of the Boston office for American Type Founders Sales Corp., was the first speaker and emphasized the importance of such points as checking the levelness of presses, checking of minor parts for wear, care in the use of proper size wrenches to avoid rounding the corners of bolts and nuts, keeping oil holes clean, and proper lubrication. He urged the replacement of worn parts as being more economical than waiting for a breakdown or accident.

The other speaker was William Heiser, eastern district service manager for Harris-Seybold-Potter Co., who emphasized that it is the pressman's duty to take care of the press. Cleanliness, he said, is most important, as most press troubles derive from plants and presses not kept clean. He also urged pressmen and management to allow time for regular cleaning of presses when they are not running. He reported that many accidents and injuries to both presses and the men running them result from cleaning presses while they are running. Management should

thank the man who takes time to oil and clean his press, he stated. "One drop of oil in the oil hole is better than a barrel of oil on the floor," he remarked.

Guests attending the April meeting included Walton W. Sullivan, president of the Litho Club of New York, and Oscar Falconi, treasurer of the New York club.

Seven new members were elected by the board of governors during April. They are: Robert Gardner, and David Oser, Gardner-Gibbons Printing Co.; William H. Gatward, Philadelphia Quartermaster Depot; Clarence Hoffman, Penn Lithographing Co.; Lloyd B. Lowe, Mid City Press; William McMahon, Sun Printing Co.; and George Murray, Dunlap Printing Co.

The club plans an outing Saturday, June 30, at the Philadelphia Rifle Club. Details will be announced later.

DuPont Absorbs Defender

Directors of Defender Photo Supply Co., Rochester, on April 10, voted to recommend to stockholders the merger of their company with the Photo Products Department of E. I. duPont de Nemours & Co., Wilmington, Del. Terms of the transaction were not announced. L. Dudley Field, president of Defender, said that if the offer is accepted no changes in personnel are contemplated by DuPont. Mr. Field, who has been president of the Rochester firm since 1923, will continue as

manager of the Defender Division. Karl Teo Molin, vice-president of Defender, will remain as assistant manager.

Mr. Field said that the merger is a logical one since the two companies have been closely related for many years in the manufacture and sale of allied products. Defender has been the exclusive distributor of DuPont sheet film since 1927. The DuPont company does not manufacture sensitized papers, the principal Defender product, but at its Parlin, N. J. plant makes motion picture, industrial X-ray film, portrait and micro-film. At Towanda, Pa., the DuPont Photo Products Department also makes intensifying and fluoroscopic screens and luminescent chemicals.

The Defender firm was incorporated in 1914, but stemmed from Frank Wilmot who began sensitizing paper for the Rochester trade in 1895. An Army-Navy E award and a renewal star have been won by Defender for its war production.

Produces Battlefield Signs

General Outdoor Advertising Co., Chicago, is making effective use of infrared radiant heat to dry paint on metal plates used for directional signs in "mined areas" at the various battle fronts. After being sprayed, the steel plates move on conveyor belts through a 45-foot tunnel between facing banks of the infra red lamps where a 300 degree heat dries the coating at the rate of 250 plates per hour. After this baking the plates are removed for silk screen printing.

Canadians Plan for V-E Day

Complete plans for closing down plants on the official announcement of the end of the war in Europe have been made by Canadian lithographers through the Canadian Lithographers Association. Details covering washing of presses, gumming of plates, flying of flags, calling in of delivery trucks, and providing regular pay for employees for time off for official observance are included in a bulletin of the association.

L. D. Field

Karl T. Molin



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Rising Papers
PRINTING AND TECHNICAL

Round Table Meetings End

The last of the Round Table Club meetings which have been held at weekly and biweekly intervals for the past several months by the Baldwin Paper Co., at the New York Advertising Club was held May 10, when Stanley O. Styles, New York manager of Martin Cantine Co., and Edward Chadwick, New York manager of L. L. Brown Paper Co., were the speakers.

At the preceding meeting Harold Holden, Oxford Paper Co., New York, and James E. Kendrick, New York Employing Printers Association, were the speakers. Mr. Holden reviewed the paper supply situation for the approximately 70 persons from the graphic arts and paper trades attending, and stated that 17,000,000 tons of paper now being made per year, if on the old heavier basis weights, would amount to a total paper surface of some 21 or 22 million tons. He said that present waste recovery was about 62 per cent, and that the current shortage of rosin would hamper offset paper production. Mr. Kendrick discussed the recently revised War Production Paper Orders.

At the preceding meeting April 11, the speakers were Joseph Moses, Falulah Paper Co., and E. F. Miles, Crocker, McElwain Co. Mr. Moses predicted some relief from the paper shortage in June or July, depending on the close of the war in Europe, but urged the saving of every pound of scrap paper. He asserted that better paper than has ever been made before will be on the market 90 days after V-E Day, produced from Swedish pulp by U. S. mills which have learned much during the war.

Baldwin company officials stated May 10 would be the last meeting of the club until fall unless some special occasion arose. The club was started in July, 1944.

Slater Joins ATF

Herman A. Slater, former production manager of Frankenberg Brothers, Columbus, Ohio, and active in the Columbus Craftsmen's Club and the international Craftsmen's organization, has joined American Type

Founders Sales Corp., Elizabeth, N. J. as a product engineer in the Product Research and Development Department. Fred A. Hacker announced during April. Mr. Slater began his career in printing as an apprentice compositor and press feeder in Kansas City and has since held positions as foremen and superintendent in various commercial, specialty and paper box plants.

N. Y. Club to Hear Wood

William H. Wood, director of chemical research of Harris-Seybold-Potter Co., Cleveland, has been engaged to address the Litho Club of New York at its last regular meeting scheduled for the season. The meeting will be Wednesday, May 23, at the Building Trades Club, 2 Park Ave. "Beyond the Halftone Dot" is Mr. Wood's subject, and he will discuss the principles of chemistry as they can be applied to the improvement of lithography. He will show a series of photomicrographs in color to illustrate his talk.

Schmidt Man Joins KGO

George Larue, formerly of Schmidt Lithograph Co., San Francisco, recently joined radio station KGO, that city, in a sales capacity.

New Yorkers at Waldorf

Nearly 250 lithographers with wives and guests attended the annual dinner dance of the Litho Club of New York, held Saturday, April 21 at the Waldorf-Astoria Hotel. The club reserved the entire Starlight Roof for

Don Grant Joins Harris



Don Grant (above) formerly superintendent of Advertisers Offset Corp., New York, has joined the staff of the Chemical Division of Harris-Seybold-Potter Company, Cleveland. In addition to many years of practical work in lithography, Mr. Grant has studied electronics for several years, has written material for the Lithographic Technical Foundation, and has taught photography in the lithographic courses given at the New York Trade School. At Harris, Mr. Grant will work on the research and sales program of the Chemical Division.

Lithogs Prepare for Drive

Urging that it is important for everyone to do his utmost to support the Seventh War Loan, which started

May 14 and continues through June 30, over the top, Raymond Rubicam, Young & Rubicam, told members of the section ways and means of accomplishing this result at a luncheon meeting at the Union League Club, New York, on May 2nd.

Mr. Rubicam pointed out to those present the necessity of having each industry in the section and each group of executives make every possible effort to bring their particular industry up to or beyond the quotas assigned.

E. R. Kresy, Consolidated Lithographing Corp., Brooklyn, is one of the division supervisors.

In the lithographers section, R. R. Heywood, R. R. Heywood Co., and David H. Sloane, secretary of the National Association of Printing Ink Makers, are co-chairmen.

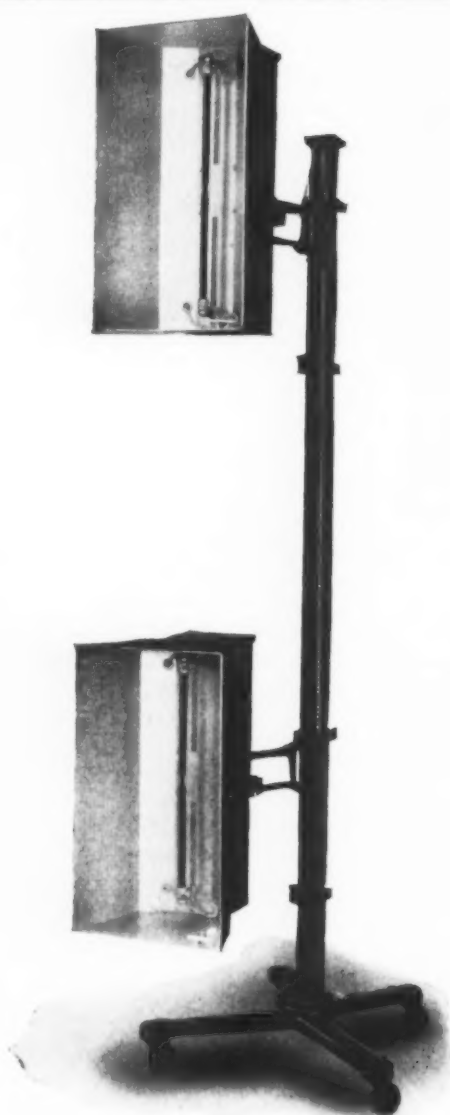
Beadie Joins Litho Firm

R. Ernest Beadie, who has been with Fred'k H. Levey Co. (Canada) Ltd., since the purchase by that firm of Thorp-Hambrook Co., Ltd., Montreal, recently joined B. G. Lithographing Co., Georgetown, British Guiana. Mr. Beadie is a past president of the Montreal Club of Printing House Craftsmen.

the evening and the program included vocal and orchestra music, dancing, and several specialty entertainment numbers featuring Latin American dancers, a magician, songs by a popular vocalist, and a hobby horse novelty act in which members of the audience

took part. Ted Broadston, Broadston Litho Supply Co., headed the committee in charge of arrangements, and he was assisted by Walton W. Sullivan, Tooker Litho Co., club president, and Oscar Falconi, Maverick & Wissinger, club treasurer.





MACBETH
DOUBLE DECKER SET
 SINGLE ARC CAMERA LAMPS
TYPE BID5
 WITH
"NONSPOT" REFLECTORS

The lamps may be burned throwing the light straight ahead or they may be tilted either upward or downward. They may be utilized for all kinds of copy whether it be flat work, direct object work or color work.

The lamps employ the full 12" trim of carbons. It is only necessary to trim each set of carbons once.

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SIMPLE TO USE
PERFECT RESULTS

HYDRO-ALBUMEN was created by us especially for the lithographic industry and represents the most advanced accomplishment of a stabilized, non-deteriorating solution of albumen for a light sensitive surface plate coating.

It will give lithographic plates that develop quickly and thoroughly under water, with a printing image that is **much more durable** than is obtainable from egg albumen solutions.

Dried egg albumen contains much bacteria that causes hasty deterioration of coating solutions and many plate making failures are directly due to this unsterile condition.

HYDRO-ALBUMEN has been prepared with laboratory precision, with the purpose of being trouble-free and its use will eliminate many of the unaccountables. Its use also represents economy of plate making costs and saves the time of the plate department making its own albumen solutions.

In general **Hydro-Albumen** is similar in light hardening quality as egg albumen and our product has been standardized so that little change is required in the usual procedure of making plates, namely, counter-etching, coating, exposure, inking, developing, etching, and gumming-up.

Let us have your trial order today for one or three gallons. Purchase price refunded if not found satisfactory.

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MANUFACTURING CHEMISTS AND COLORISTS

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Open Letter Lists Opportunities

"Lithography faces its greatest opportunity. It has waited 50 years for the present most favorable combination of circumstances — favorable to employees as well as employers", Wade E. Griswold, executive director of the Lithographic Technical Foundation states in an open letter to the entire lithographic industry issued during April. "To help realize that opportunity", he continues, "the pace of your Technical Foundation program has been stepped up, its scope widened and the benefits spread, in accordance with the insistent demands of you in lithography."

Mr. Griswold points out that the budget for 1945 has been increased to almost three times the amount annually which obtained through the previous 15 years during which times many necessary jobs accumulated.

He lists five points as needs which the Foundation can economically and efficiently put to good use:

1. Ten thousand additional \$10.00 Contributing Members to the Lithographic Technical Foundation among employees in plants which already are or may become members of the Foundation.
2. Five hundred additional Sustaining (\$250 per year) or Annual (100 per year) lithographic or related industry members.
3. One hundred additional endowment members — Founder \$25,000; Benefactor \$10,000; Life \$5,000; Associate \$1,000.
4. Five thousand additional purchasers of extra texts and shop manuals.
5. Commitment by one hundred plants to purchase one each of the packages of nine items of in-plant training materials for 14 skilled craft courses at \$25.00 each and special subject course at \$50.00 each, as they become available in the next few weeks and months.

He further points out that lithographers are paying more than 60 per cent of the cost of Foundation research and educational program, a larger share than is carried by the supply trades.

As of May first, the Lithographic

Technical Foundation endowment had reached close to \$900,000 (double the figure of September 1944). The new annual operating fund from annual dues had reached \$50,000—a good start, Mr. Griswold reports.

"Mighty Seventh" is Biggest Yet

The "Mighty Seventh" War Loan being carried on during May and June is the subject of the greatest mass selling job in the history of the world, according to Kerwin H. Fulton, director of war activities of the Outdoor Advertising Association.

Outdoor poster panels carrying lithographed posters will exceed the 134,000 used in the promotion of the Sixth War Loan, he said, and other media have increased their space allotments. A large number of May and June magazine covers were also scheduled to carry the Seventh War Loan message. (See ML cover.)

Former Litho Salesman Dies

William P. Hilton, 72, retired salesman for Crocker Union Lithograph Co., died April 27 at his Western Springs, Ill., home near Chicago.



One glance at this picture and the chances are you immediately recall that old saying "Great Oaks From Little Acorns Grow." That is as it was intended. We want to emphasize the importance of 'Little Things.' Little things in the pressroom comparable to the acorn in productivity.

Producing offset lithography requires along with skill, many unheralded and seemingly unimportant 'little things.' ROLLERS for example, one of the smallest items of expense in the job yet they and they alone can distribute the ink and water. Quality in the job can be no better than the ROLLERS. Learn the importance of little things, GOOD ROLLERS.

Use BINGHAM Offset ROLLERS, Roller supplies and Dampers.

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Main Office: 406 Pearl Street, New York 7

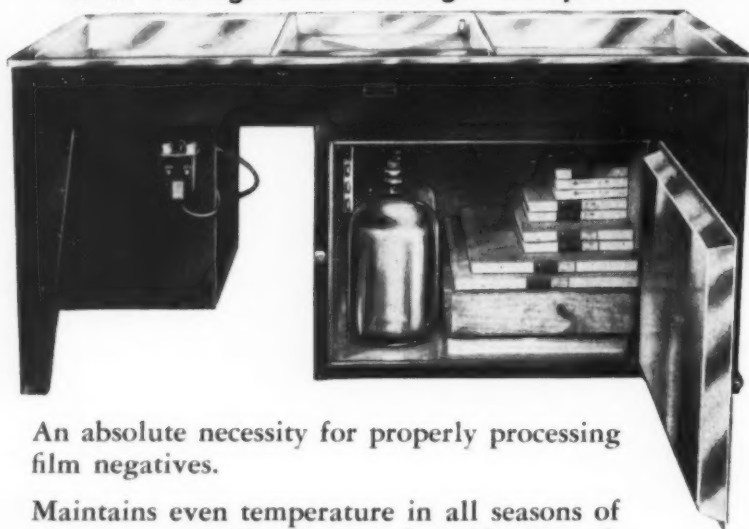
Baltimore

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THE DOUTHITT TEMPERATURE CONTROLLED DEVELOPING SINK

With Refrigerated Storage Compartment



An absolute necessity for properly processing film negatives.

Maintains even temperature in all seasons of the year. With Heat and Cold Control.

Send for circular and prices on our different types of sinks

THE DOUTHITT CORPORATION

650 W. BALTIMORE AVE.
DETROIT 2, MICHIGAN

BLANKOT

Reg. U.S. Patent Office

A NEW REMEDY FOR AN OLD CONDITION

BLANKOT is a liquid that immediately rectifies bad conditions of rubber blankets on offset presses, whether caused by grease and oil, water, or atmospheric conditions, all of which make rubber blankets unfit for use.

Apply BLANKOT with a soft rag or cheese cloth

MANUFACTURED ONLY BY

MARTIN DRISCOLL & CO. ★ CHICAGO, ILL.

GREAT WESTERN PRINTING INK CO., PORTLAND, OREGON ★ BRANCH FACTORY, MILWAUKEE, WIS.

POPAL, War Council Cooperate

The affiliation of the Point of Purchase Advertising Institute, and the War Advertising Council, was announced April 19, at a luncheon meeting at Hotel Biltmore, New York, attended by 125 persons from the display advertising industry. The Point of Purchase organization, is to be the sole representative of display advertising on the Council, under the new plan, and this medium will line up with other advertising media to lend its full support to the war.

George Rose, Mounting & Finishing Co., Brooklyn, president of POPAL, presided at the meeting which was addressed by Paul West, vice-chairman of the Council; Mr. J. S. Repplier, executive director of the Council; Jack Dunlancy, director of graphic arts, O. W. I.; and Fred Wertz, president of Window Advertising, Inc.

George Kindred, Kindred, MacLean & Co., Long Island City, vice-president of POPAL, closed the meeting with a request to the display industry that its members support this important phase of the home front effort in the war, as have the other advertising media. Mr. West pointed out that the display industry had already made a large contribution to the war effort but that this new affiliation would serve to properly record and credit such contribution in the future.

Mack Speaks at Milwaukee

Norman A. Mack, technical director of Roberts & Porter, Inc., was the speaker at the April 24 meeting of the Milwaukee Litho Club, held at the Viennese Gardens.

At the previous month's meeting, the club heard a talk by Mr. Byersdorfer of Eastman Kodak Co. who discussed various photographic color processes as utilized by lithographers. This included the use of various Eastman color films and products and the orange and magenta contact screens. He also told of the war-time production problems of his firm, stating that most of the production of its 24 hour a day seven days a week schedule was going into war

work. The meeting was held March 27 at the Viennese Gardens. Nearly 20 attended.

Clarence Van Cura, a supervisor at Brauer & Son, was admitted to membership in the club.

St. Louis Club Meets June 7

The next open meeting of the St. Louis Litho Club is planned for Thursday, June 7, at which time a discussion of offset inks is scheduled to be held. The speaker is to be John Braznell, of Braznell Ink Co., St. Louis. The meeting is to be at the DeSoto Hotel.

At the club's last open meeting, held in April at the same place, George Ortleb, Ortleb Machinery Co., was the speaker, and his talk on personnel drew an attendance of some 50 lithographers.

A closed meeting of the club, to be devoted to club business and general discussion was to be held May 3.

Mueller Speaks at Washington

At the April meeting of The Washington Club of Printing House Craftsmen, the speaker of the evening was Emil Mueller, member of the sales force of Edward Stern & Company, Inc., Philadelphia combination plant and known for his work as author of the Philadelphia Plan for Veterans' Rehabilitation in the Graphic Arts. Mueller's talk before the Washington Club was entitled, "Economical Production of Quality Printing." He has been associated with various phases of the graphic arts industry for more than 30 years.

Hammermill Gets Fifth E

The men and women of Hammermill Paper Company have won the Army-Navy Production Award for the fifth time, the company announced April 30. The new award adds the fourth white star to the Erie, Pa., mill's "E" pennant.

GPI Opens West Coast Division

Top photo shows the new Los Angeles office and plant of the new Pacific Coast Division of General Printing Ink Corp. Lower photo shows the division's new plant at South San Francisco. The new division coordinates the activities of Fuchs & Lang Mfg. Co., Geo. H. Morrill Co., and Sigmund Ullman Co. Branches and service stations are located in principal coast cities.



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MAKLIN
LITHOPLATE GRAINING CO.

551 West Congress Street, Chicago, Illinois

Make sure it's MAKLIN grained
A clean quick dried, neutralized plate
Keeps its deep grain throughout the run
Long runs are assured
Impressions clear and strong
No worry of plate going blind

Grained by experienced craftsmen
Regrained and new grained zinc plates
Aluminum and glass, for the Litho-
graphic Industry
Inspected for quality, texture and
depth of grain desired
No grain *too* difficult to produce
Ends platemakers' headaches
Displays highlights of his skill and
craftsmanship

Pressmen relax during the run of a
MAKLIN Grained Plate
Lightens the burdens of production
Always consistent in uniformity of
grain
The plate properly grained for your
needs brings best results
Every plate inspected thoroughly be-
fore leaving our plant
Shoot the job on THE MAKLIN
GRAINED PLATE



Offset Plates

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Color separations
Color Corrected negatives
Positives
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Color proving
Black and white
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Machine made plates
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A complete service to the
offset printer.

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Every job given exacting care
and supervision.

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COMPANY

113 ST. CLAIR AVE. N. E.
CLEVELAND 14, OHIO

Fuchs & Lang Manufacturing Co.

Celebrates Seventy-Fifth Year

FUCHS & LANG MFG. CO., New York manufacturers of lithographic inks and supplies, is observing its 75th anniversary this year, and has traced its varied history back to its beginnings in 1870. Beginning as dealers in imported bronze powder and gold leaf used in the decoration of chinaware, John M. Fuchs and J. C. F. Lang formed a partnership in that year, and within ten years had entered the field of lithographic and printing inks, lithographic stones and other supplies for the infant lithographic trade.

Within 16 years, the new company opened a branch in Chicago, and by this time had added the importation of stone lithographic presses from Leipzig, Germany. A little later tin decorating presses were added to the line, also imported from Germany. Duties and other restrictions hampered the import business, and before long Fuchs & Lang had entered the press manufacturing business and offered a full line of presses made in their Brooklyn plant. A factory for manufacturing bronze powder soon followed, and this led to the making of a line of inks and other lithographic supplies.

By the time the company was a little over 20 years old other branches had been established in principal cities, and the present name was adopted in 1892, embracing all of the manufacturing operations which by that time included bronzing machines, roller embossing machines, hand lithographic presses, stone engravers' ruling machines, stone planers and other equipment. In 1900, F & L purchased Emmerich and Vonderlehr, their largest competitors, and as a result became the largest manufacturer in the field.

Expansion in the manufacturing field led to the establishment of a plant in Rutherford, N. J. Developments in this new plant included



John F. Devine



Robert J. Butler

machines for applying coatings to tin sheets and a rubber transfer cylinder hand press. Ink making facilities were later added at Rutherford to replace the limited equipment in the Brooklyn plant.

Research and development work followed in the metal decorating field and for lithographing on collapsible tubes. Another ink making plant was added in 1915.

In 1925, Robert Lang, a son of J. C. F. Lang became president of the company upon the death of his mother who had served in this capacity

since 1902, shortly after the demise of her husband.

The Fuchs and Lang Manufacturing Company and four other large printing ink manufacturers—Geo. H. Morrill Co., Norwood, Mass., Sigmond Ullman Company, New York, Eagle Printing Ink Co., Jersey City, N. J. and American Printing Ink Company, Chicago—merged in 1929 to form General Printing Ink.

Albert J. Ford became chairman of the board of directors of General Printing Ink Corporation at the time of its formation and his place as general manager of the Fuchs and Lang Manufacturing Company Division was taken by J. C. Kallsen, former sales manager.

The Rutherford Machinery Works remained a part of the Fuchs and Lang division until 1933, when it was decided for reasons of efficiency to separate machinery business and the Rutherford Machinery Company was made a separate division of General Printing Ink Corporation. Since this change was made Fuchs and Lang has concentrated on the manufacture and distribution of litho and printing inks and lithographic supplies.

When Mr. Kallsen died in 1934, John F. Devine, who had joined the company in 1915, became general manager. In January 1943, when Mr. Devine's directional duties as vice-president of the Corporation made such demands on his time, Robert J. Butler was appointed General Manager of The Fuchs and Lang Manufacturing Company Division. During Mr. Butler's long association with Fuchs and Lang he served the company in many capacities.

Although Fuchs and Lang enjoys a prominent position in the lithographic field, being one of the largest and oldest houses in the United States, it also sells a large volume of letterpress inks. One of the factors contributing to their record in the graphic arts supply field is the research and development department under the direction of Dr. Hugo Stockmayer. Now as in the past, a great deal of emphasis has been placed on laboratory work in conjunction with practical knowledge



BLACK THAT'S BLACK WHITE THAT'S WHITE

Graph-O-Lith developer gives you negatives with both these characteristics. Never any loss of tone or detail. Always clear dot formation, because Graph-O-Lith halts development in the low densities. Does its job in hard water and won't blister your negatives.

GRAPH-O-LITH DEVELOPER FOR LINE AND HALFTONE NEGATIVES ON PROCESS FILM, STRIPPING FILM AND PAPER.



Help yourself,
help your country —
BUY WAR BONDS.

PHILIP A. HUNT COMPANY

ESTABLISHED 1909

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CHICAGO, ILL.

LONG ISLAND CITY, N.Y.

CAMBRIDGE, MASS.

CLEVELAND, OHIO



D I S T R I B U T E D B Y

PAPER SALES CORPORATION

41 PARK ROW

Fine Papers

NEW YORK 7, N.Y.

WORTH 2-1280

obtained over the years. Dr. Stockmayer has been in charge of this department for the past 30 years, and from his laboratory have come many improvements in ink formulations.

As a result of the demands and restrictions of a wartime economy which created many production problems unprecedented in the history of the lithographic industry, the Fuchs and Lang laboratories developed a number of new applications for old products, and many new products, developed to meet government requirements, will play a leading role in the postwar period, they believe.

UTA Adopts Education Plan

A plan of graphic arts Education to meet future manpower problems was adopted recently by the United Typothetae of America through its recently organized education committee. The plan includes cooperation with the endowment fund of the Department of Printing of Carnegie Institute of Technology, promotion of the annual Printing Education Week, cooperation with the Boy Scouts of America in promoting interest in printing among boys, and stressing the educational value of graphic arts magazines.

Members of the UTA committee include: Emil Mueller, Edward Stern and Co., Philadelphia, who was elected chairman; C. William Schneidereith, Schneidereith and Son, Baltimore; Arthur E. Ormsbee, Commonwealth Printing Company, Grand Rapids; Richard Chamberlain, Ransdell, Inc., Washington, and A. G. McCormick, McCormick - Armstrong Co., Wichita. L. Irving Lamphier, United Typothetae of America executive secretary, and Fred J. Hartman, educational director, National Graphic Arts Education Association, are advisory members.

Pvt. Mergenthaler Killed

Pvt. George O. Mergenthaler, grandson of Ottmar Mergenthaler, inventor of the Linotype, was killed in action in Luxemburg, his parents, Mr. and Mrs. Herman C. Mergenthaler, Rye, N. Y., announced.

Scrap Plan Pulls 2500 Tons

Two thousand five hundred tons—five million pounds—of old printing machinery was channeled into war production to help meet the steel crisis through the Wartime Scrap Allowance Plan carried on by Miller Printing Machinery Co., Pittsburgh, the company announced. This tonnage of scrap iron, steel and other metals, represented about 400 old presses and other types of graphic arts machinery which was outmoded and inefficient.

The plan was first presented to the printing industry in 1939, and rid the industry of much cheap, outmoded equipment which lowered standards of printing quality and efficient production. The peacetime plan was revived in 1942 as the Miller Wartime Scrap Allowance Plan. It provided two options for the printers' choice. Under Option #1, a printing concern could scrap its old printing machinery, retain the cash scrap value of the old equipment and receive a Miller Credit Certificate for two times the scrap value which might be applied towards the purchase of new presses after the war. Under Option #2, the printer could scrap his old printing machinery with the additional incentive that if U. S. War Bonds were purchased with the money received as scrap value for the old machinery, Miller would then give that company a Credit Certificate for three times the scrap value of the old machinery.

Almost \$25,000.00 worth of U. S. War Bonds were sold under Option #2 of the Miller Wartime Scrap Allowance Plan within the first 18 months. All sorts of old machinery were scrapped from many kinds of printing plants. Machinery scrapped included platens, cylinder, rotary, offset presses as well as plate-making, bindery and typesetting machinery.

Manufacturers of book matches, greeting cards, books, commercial printing, magazines, newspapers, labels, boxes, printed specialties, price tickets, lithographed and engraved specialties, as well as many other products, contributed their old machinery to the national need for

scrap metal at or below the ceiling prices set by OPA.

Opposes Postal Rate Increases

Proposed Post Office Department plans for increasing various postage rates will "kill the goose that lays the golden eggs," says the Graphic Arts Association of Illinois in a bulletin calling attention to government moves in this direction. With a current surplus of \$117,643,897 and a still larger surplus in prospect on next year's huge war volume of mail, additional income is not needed, the association claims. Any increase in rates will simply decrease the volume of second and third class matter in which printers and lithographers are vitally concerned, they say.

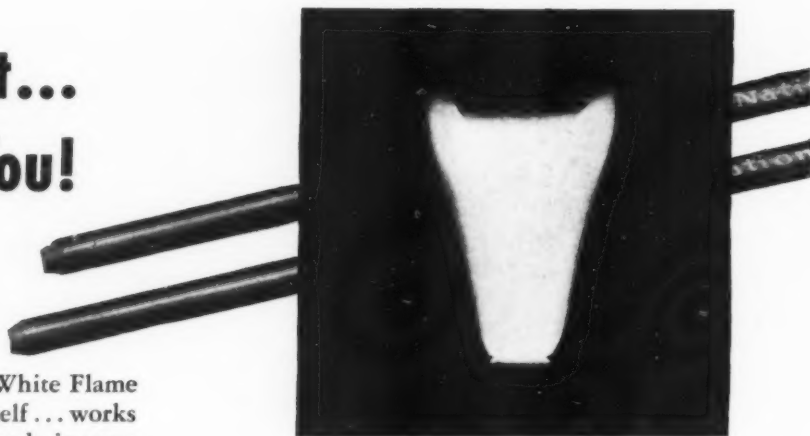
First of a series of bills, H. R. 2502, dealing with increases in parcel post rates is already before Congress and if no effective opposition develops, further bills revising rates on other mail matter will probably follow, the Association says. If this "piecemeal" procedure continues, it predicts that increases can be expected in third class rates, catalog rates, second class entries affecting small fraternal publications and those of educational institutions, other periodicals and printed products.

Jointly with the National Council of Business Mail, the Illinois printers' group urges its members to contact their respective Congressmen and suggest that they let present rates stand. "If not that, then ask them to make all proposed postal rate changes in one bill," the organization advises, "and allow ample time for pro and con opinions to be expressed in public hearings. Also ask your customers to do likewise."

Foster, Type Designer, Dies

Fred S. Foster, 55, designer of several type faces, some of which bear his name, died April 3 in Chicago, following a brief illness. He had lived in Chicago many years, but was a native of Port Huron, Mich.

Man-Made Sunlight... That Works for You!



THE DEPENDABLE LIGHT of "National" White Flame Carbons... man-made rival to sunlight itself... works hard for you every time an exposure is made in your lithographing plant.

Its work consists primarily of these things:

Giving faithful color!

Providing uniform and constant intensity!

Being instantly available!

The high photographic speed of the White Flame Carbon arc, and its close similarity to daylight, made it the preferred light source even when your reproduction was mainly monochromatic. Today, for color reproduction and for black and white, there is no other artificial light source providing so many excellent photographic qualities.

Keep your eye on the Infantry... the doughboy does it!

We suggest that to make the most of these qualities, you take good care of your lamps and clean their reflectors and carbon holders regularly.

USE "NATIONAL" WHITE FLAME PHOTOGRAPHIC CARBONS—THE LIGHT OF DAYLIGHT QUALITY

The registered trade-mark "National" distinguishes products of National Carbon Company, Inc.

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation



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The Pioneer Plate Grainers of America

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INCLUDING THOSE
REGRAINED FOR
MULTILITH
ARE MARBLE
GRAINED**

"RELIABLE" is far more than just part of our name. It means to our customers that our plates can be depended on to give first-class results because from start to finish the graining is handled by experts of long experience. Our plates are made right to work right—they are reliable! We carry a full supply of Zinc and Aluminum Sheets for Offset, Rotaprint Presses, in fact for all the lithograph trade.

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A trial order should "sell" you our services and products.

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Cramer Speaks at Hartford; Club Admits Women

GEORGE CRAMER, research director of Sinclair & Valentine Co., New York, was the speaker at the May 4 meeting of the Connecticut Valley Litho Club held at Hotel Bond, Hartford. Mr. Cramer presented a motion picture, "Serving the Graphic Arts" and discussed the fundamentals of ink making. He also had on display a number of dry colors, ink chemicals and vehicles with which he demonstrated some of the basic ink making processes.

In an action thought to be the first of its kind in the history of any litho club, the Connecticut group admitted several women to membership. Eight of the women were employees of Rich Lithographing Co., Chicopee Falls, Mass., and one was from the Worcester Lithograph Co., Worcester, Mass. They were Mrs. Doris Bowman, Mrs. Evelyn LaBelle, Mrs. Veronica Rivest, Miss Marietta Bineault, Mrs. Jessie Bordeau, Mrs.

Lila Churchill, Mrs. Ralph Rich, and Miss Martha Boulay, all of the Rich company, and Mrs. Claire Jordan, of Worcester.

The meeting, which was the last regular business meeting scheduled until fall, was designated as Past Presidents' Night, and the men who have headed the club through its four year history were on hand. They are Anthony DiNicola, formerly of A. D. Steinback & Sons, New Haven; Fred Kendall, Kellogg & Bulkeley Co., Hartford; Ralph Rich, Rich Lithographing Co., Chicopee Falls, Mass.; and the present president, Albert Schulze, Worcester (Mass.) Lithographing Co.; Frank Poll, secretary, presented each with a plaque.

Plans were announced for an outing Saturday July 21 to be held jointly with the Connecticut Valley Club of Printing House Craftsmen at Turner Park, E. Long Meadows, Mass.

Announce War-Theme Awards

The National War Theme Awards Contest, sponsored by The Martin Cantine Co. to promote the official war theme advertising campaigns of the War Advertising Council, the Graphic Arts Victory Committee and the Office of War Information, is being held again this year the sponsor has announced. Specimens of any piece of printed or lithographed material that devotes some space to any official war theme campaign is eligible to compete. The object is to honor the producers of such material regardless of the amount of money spent, the method of reproduction or the kind of paper.

Entries close June 15, and may be sent to the National War-Theme Awards, 345 Madison Avenue, New York 17, N. Y. Individuals or firms may enter as many separate entries as they desire, and the Cantine Company has specified that the name and address of the individual or concern to whom principal credit is due for

the creative ability shown should be attached to each entry.

The judges will include Jacques DunLany, chief of Poster Clearance and Allocation of the OWI; Irwin Robinson, director of information of the War Advertising Council; and Miss Jane Bell, executive secretary of the Direct Mail Advertising Association, besides the permanent board of judges of the Cantine Awards, namely: F. C. Kendall, editor of *Advertising & Selling* magazine; R. W.

Palmer, editor of *Printers' Ink*; Marc MacCollum, publisher of *The American Printer*; C. O. Woodbury, art director and consultant; Ernest F. Trotter, managing editor of *Printing* magazine and director and secretary of the Graphic Arts Victory Committee.

P. D. Tracey, Albany, Dies

Phillip Tracey, 58, former vice president and treasurer of the Lithograph & Envelope Co., Albany, N. Y., died April 28 at Albany Hospital, of pneumonia, following an illness of a few days. Mr. Tracey was a member of the legal staff of the Albany District Office of Price Administration for the last three years.

No Action on Chicago Plea

At presstime, no action had been taken by the War Manpower Commission on the brief filed last month by the Graphic Arts Association of Illinois in an effort to relieve the hardship caused printers and lithographers by the ordered 10 per cent reduction of employees. Some observers believed that the end of the war in Europe would ease the situation.

Nominate Morris

Charles S. Morris, Business Letter Service, was nominated for president of the Mail Advertising Service Association of New York early in May. Other nominations are vice president, Miss M. Frances Hildreth; secretary, Harold O'Neill, Fisher-Stevens Service; and treasurer, Ed. Weinberg, Century Letter Co.

Printing Machinery Among First to Reconvert

PRINTING trades machinery is among 72 products and industries which will receive priority aid in obtaining machine tools and construction essential to reconversion, the War Production Board announced May 5. The AA-3 priority rating granted to these industries will enable them to get into operation on post-V-E Day orders and through its use it is hoped

to reduce the time lag between the cancellation of war contracts and the start of peacetime production.

"Ratings are being granted," WPB explained, "only for those items, the lack of which would hamper reconversion. There is no thought of all out retooling or construction at this time, nor of replacing items that can be utilized now."

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HAS MADE OUR PLANT THE WORLD'S LARGEST

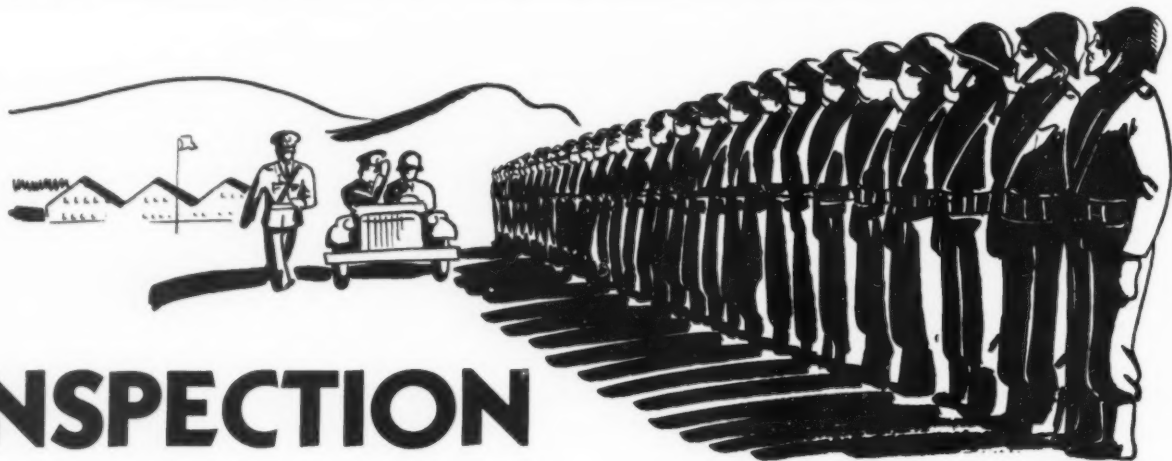
WE SPECIALIZE IN
SMALL PLATES

ALSO REGRAINING MULTILITH

ZINC and
ALUMINUM PLATES
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INSPECTION

Today's offset jobs have to stand inspection and measure up to standards, whether you have three weeks or twenty-four hours to turn them out. And in this fact lies one of the secrets for the success of ECLIPSE DEEP-SET BLACK INK. It is completely dependable for trouble-free high speed work — it assures good blacks, brilliant and strong, whether in line or halftone. ECLIPSE DEEP-SET BLACK is the product of many years of skillful experience.

and you can depend on its 100 per cent performance at all times. Send for a trial order and test it in your own pressroom.

DO YOUR PART

Help conserve essential materials. Order inks in the largest container sizes you can conveniently handle. Avoid rush orders by anticipating your needs.

HIGHEST QUALITY INK FOR THE LITHOGRAPHER

GAETJENS, BERGER & WIRTH, INC.

35 York St., Gair Bldg., Brooklyn, N. Y.

538 S. Clark St., Chicago, Ill.



EQUIPMENT & BULLETINS

Urge Support of Two Drives

Waste paper salvage and a "Vacation-at-Home" program are two war advertising campaigns that need active support by the graphic arts and advertising industries, according to recent bulletins of the Graphic Arts Victory Committee. A portfolio of information on the promotion of the vacation program has been distributed by the GAVC, as well as a lithographed brochure containing information and suggestions for the waste paper salvage drive. The latter brochure was prepared under the direction of Cy Norton, Strathmore Paper Co., and issued by the War Advertising Council. Copies are available from the GAVC, 17 East 42nd St., New York 17, N. Y.

Folder Promotes Foto-Fix

"How Do You Prepare a Fixing Bath?" is the title of a pocket size folder recently distributed by Phillips & Jacobs, Philadelphia chemical firm promoting Foto-Fix. The preparation of the Foto-Fix fixing bath is outlined in three steps, pouring the product into a tank or tray, add water, and add a little liquid hardener. The company claims that the bath fixes film, plates and paper in half the time usually required and hardens emulsion in one-fifth the ordinary time. The folder also states that Foto-Fix is long lasting.

Vari-Typer Issues Brochure

A lithographed brochure titled "Vari-Typer, A New Tool for Business," has just been distributed by the Ralph C. Coxhead Corp., New York. The three color booklet describes the Vari-Typer composing machine, how to use it, and how it fits into offset reproduction. Many of the more than 600 different type styles, which include many foreign

language characters, are shown, as well as samples of the type of reproduction work for which the machine is especially suited. Copies of the booklet are available from the Coxhead Corporation, 333 Sixth Ave., New York 14, N. Y.

Issue Press Operating Text

"Lithographic Offset Press Operating, Volume I," has been mailed to members by the Lithographic Technical Foundation during the last week in April, the newest in the series of basic texts. This new 72 page book is basically the work of David J. MacDonald and Charles W. Latham of the Foundation educational and employee training staff. For valuable aid, assistance and suggestions, the Foundation acknowledges indebtedness to Brett Lithographing Co., Thomas Flavell of Lithographers National Association, A. E. Giegengack of the U. S. Government Printing Office, Theodore Makarius of Fuchs & Lang Mfg Co., and R. P. Tyler of Harris-Seybold-Potter Co.

"Lithographic Offset Press Operating" is being issued by the Foundation in two separate volumes. Volume I is devoted to the subject of preparing and starting the press. Its aim is to present a clear picture of the general preparations and necessary steps to be taken before actually running any lithographic offset press whether in a large, medium or small shop. The contents of the book stem from more than twenty-five years of shop experience and from the suggestions and advice of representative minds of the entire lithographic industry, the Foundation states.

Volume II of the same title, which deals with conditions during actual operation of the lithographic offset press was in the bindery when

Volume I was mailed and members will probably receive copies early in May. This will be the sixth basic text to be issued under the Foundation's program of employee training materials and it will be followed by others now in various stages of production, the next of which will be "Stripping (Black and White)" which is also in the bindery. Seven Shop Manuals have been completed and distributed and others are rapidly nearing completion.

Information on any of these books may be obtained from the Foundation, 220 E. 42 St., New York 17, N. Y.

Issues Ink Troubles Booklet

"Ink Troubles, Their Possible Causes and Suggested Remedies," is the title of a pocket size booklet recently distributed by Gaetjens, Berger & Wirth, Inc., Brooklyn ink manufacturers. The booklet lists 41 specific troubles encountered in the pressroom and offers causes and remedies. The subject matter is reprinted from *Printing Equipment Engineer* and *American Ink Maker*. The two color booklet was lithographed by Hinkhouse, Inc., New York. Copies are available from Gaetjens, Berger & Wirth, 35 York St., Brooklyn 1, N. Y.

Insurance Company Reports

The thirty-first annual report of the New York Printers and Bookbinders Mutual Insurance Company has been issued recently and copies are available upon request by lithographers, printers and bookbinders. In reporting to policy holders on the financial condition and operating record of the company C. F. von Dreusche, president and general manager, stressed that in 31 years of operation more than a million and

WITH A BACKGROUND OF

20 YEARS

EXPERIENCE

we can give you a grain that will show better results in your pressroom.

All sizes new plates for both Harris and Webendorfer Presses, in stock for immediate delivery.

Graining and regraining of Aluminum Plates.

We specialize in regraining Multilith Plates.

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Branch Plant:

DIXIE PLATE GRAINING CO.

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Atlanta, Georgia

**NEW VULCAN NO. 60
OFFSET BLANKETS
HELP US DO FINER
PRINTING—FASTER!**



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a half dollars has been returned to policy holders in the form of dividends. At the close of 1944 assets were over one million dollars and surplus more than half a million dollars. Ratio of losses to premiums earned was held to an increase of only one hundredth of one per cent. Because of the large number of unskilled employees in the graphic arts due to manpower shortages, this record was achieved by a large increase in the company's safety engineering work.

Richardson Joins WPB

Grant Richardson of Hammermill Paper Company, who was appointed recently as assistant to the director of the Paper Division, Forest Products Bureau, War Production Board, planned to assume his duties in Washington on May 7. Mr. Richardson has a background of more than 30 years' experience in paper manufacture and selling. For several years he has been district sales manager for the Eastern territory and export manager for both Hammermill Paper Company, Erie, Pennsylvania, and

Grays Harbor Pulp and Paper Company, Hoquiam, Washington. Mr. Richardson has been serving also as a member of the Paper Advisory Board of the Foreign Economic Administration in Washington.

LITHO MEETS CHALLENGE

(Continued from Page 33)

most his entire facilities to a special job which has contributed much toward increasing the speed with which naval vessels damaged in combat are returned to service.

ANY discussion of lithography in this war would certainly be incomplete without some mention being made of the topographical units that are serving on all of our battlefronts and produce a great variety of on-the-spot material. These units are manned by personnel, many of which were previously employed in our commercial shops. These men are frontline troops and frequently have been under fire suffering heavy casualties. A recently returned veteran

who served in a mobile unit attached to General Patton's Army, at the time of the break-through on the Normandy beach-head, stated that during a 30-day period his unit moved 17 times and on several occasions was actually ahead of the infantry. The Gunto (archipelago) Graphic, the first English language newspaper printed in the Ryukyus, is being printed on Okinawa by offset-lithography by one of these units.

LITHOGRAPHY'S contribution on the home front has also been substantial. Posters, booklets and other promotional and informational material have played an important part in the success of drives for funds for the Red Cross and other similar organizations, as well as in all of our War Bond Drives. They are also serving as a medium for obtaining the coordinated effort in local communities that is necessary for the success of some 50 or 60 campaigns similar to the waste paper campaign, the O.D.T. campaigns, etc. They are as well an important medium for the building up and maintenance of



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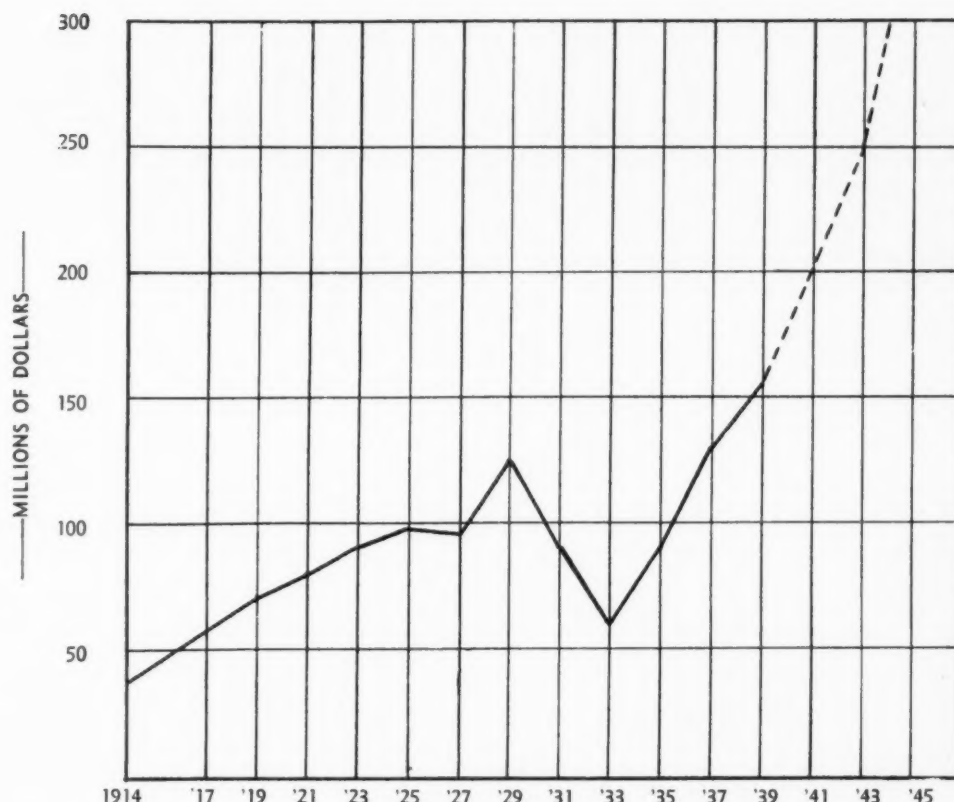
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morale on both the home and fighting fronts.

While official recognition of the industry's contribution to the war effort has been slow in coming, the War Manpower Commission has recognized the essentiality of lithography by designating in August of 1943 the production of "military, naval and technical charts and maps, instructional and technical manuals, and training literature" as essential activities, and further at the same time designating that the occupations "foreman, lithographic arts; lithographic layout man; lithographic artist; lithographic cameraman; lithographic stripper; lithographic opaquer; lithographic press plate maker—(A) photomechanical (B) hand transfer; lithographic tuscher; lithographic pressman; lithographic press operator; lithographic cutter" were essential occupations in the production of these essential products. In January of this year at the time of the introduction of the "draft priority plan," all the products listed above, with the exception of "training literature," were raised to a new classification of critical activities, and

all of the occupations listed above became critical occupations in the production of the newly designated critical products. No other graphic arts industry has received such recognition from the War Manpower Commission.

Lithographers and printers have not been eligible to receive the Army-Navy-E Award since they fall in the classification of service industries and as such are not eligible to participate in this award. However, lithographers have in the past received many letters of commendation from various branches of the services, the Government Printing Office and from prime contractors.

The Army Map Service recently sent to some 90 lithographers and contributing organizations who did work for it such a letter of commendation in recognition of the support it has received from the industry. Enclosed with this letter from the Army Map Service were reproductions of letters of commendation from the Supreme Allied Commander transmitting a statement of appreciation of the Supreme Allied Commander, Mediterranean Area, together

with that of the Assistant Chief of Staff and the Chief of Engineers for a job well done.

While the Army as yet has not announced an award in which lithographers are eligible to participate, the Navy and the Government Printing Office have just recently announced such special awards—so recently in fact that the Navy has not yet presented any of these awards. Lithographers, however, were well represented among the first six companies to receive the G. P. O. Award.★★

ZINC OXIDATION

(Continued from Page 66)

cess so that no changes in procedure will be introduced.

e. It should not discolor the plate so as to interfere seriously with the visual contrast of the image.

Phosphate treatments such as "Bonderizing"² involve the use of special chemicals and equipment. In this treatment, the surface of the zinc presumably is chemically converted into a dark, inert, homogeneous film.

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consisting mainly of zinc phosphate. This film resists further action by moisture and corrosive elements. Plates treated by this process exhibit good oxidation protection but are unsuitable for lithography because the dark gray color of the film formed on the plate by the treatment obscures the image.

A number of chromate treatments have been investigated. All fail to satisfy the requirements of a lithographic plate treatment with the exception of the Cronak Process³. At the present time, this is the simplest and the most effective treatment known for the control of oxidation on zinc. It involves nothing more than dipping a freshly grained plate in a solution of two common chemicals, sodium or ammonium bichromate and sulphuric acid, this followed by rinsing and drying.

Lithographic plates treated in this manner have been exposed for six weeks to the tropical conditions of New Guinea and then *without counteretching* have been used successfully for the printing of halftones.

Untreated zinc plates after one day's exposure to the same conditions, are so badly pitted and oxidized that they cannot be salvaged by regaining.

The Cronak Process

The Cronak Process has been described by the New Jersey Zinc Company briefly in a Service Bulletin⁴ and in detail in a paper by E. A. Anderson⁵. The information contained in these references is very general in nature because of the variety of possible uses and applications of the process. Industry has used it extensively for the protection of zinc coated products and machine parts. As far as is known, however, its application to lithography has never been investigated outside of the Army Map Service. After considerable testing and control, the treatment has been found to be completely compatible with the lithographic process and a specific procedure has been worked out for its use in lithography. The information contained in these sections is a compilation of Anderson's data augmented

and revised by the results of this investigation.

The Treatment

A flow diagram of the Cronak Process is given in Figure 2. The treatment is simple and consists briefly of the following operations:

1. Remove the zinc plate from the graining machine. Wash thoroughly to remove all traces of sand. Squeegee off all excess moisture.
2. Dip the plate for from 15 to 30 seconds in the Cronak solution.
3. Drain the plate for not over 30 seconds and then wash it in a gentle spray of water until the rinse water flowing off the plate is no longer yellow.
4. Dry the plate using a fan or an air-blast.

While the process is apparently very simple and straight-forward, a

(2) Parker Rust Proof Co., Detroit, Michigan.

(3) The Cronak Process is patented by the New Jersey Zinc Co., Palmerton, Pa. under U.S. Patent No. 2,035,380.

(4) Technical Service Bulletin W-5-B-21-22 New Jersey Zinc Sales Co., 160 Front Street, New York, N. Y.

(5) E. A. Anderson "The Cronak Process"—Mimeographed Report by Research Division, New Jersey Zinc Co., Palmerton, Pa.

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detailed description of the variables encountered and the latitude permissible in each step is necessary for a complete understanding of it and its intelligent application.

(Next month Capt. Bruno will continue this discussion with a detailed description of the Cronak process, including formulas for various solutions, methods of washing and drying, costs, limitations, as well as reports on extensive tests made under various conditions.—Editor.)

GPO SPEARHEADS

(Continued from Page 37)

called upon commercial lithographers and the lithographic industry has done a big job. The GPO has had some difficulty at time in placing some orders but this condition, often brought about by demands of other government agencies as well as important commercial work, is reported improved.

The GPO's own lithographic facilities are reported to be working at capacity on war jobs of all sorts. Some time ago the Government acquired five large offset presses as replacements for obsolete equipment. This was said to represent about two per cent of the GPO facilities being changed from letterpress to offset, and at the same time increased the offset facilities of the big plant by about 50 per cent. Because much of the work for which the presses are used is highly urgent short run material, offset platemaking facilities have been doubled.

These lithographing facilities often have been used in combination with letterpress, for instance covers and inserts of books and publications are often lithographed while the text material is set in type and run by letterpress.

Another specific use of lithography by the GPO has been the fairly recent development of the utilization of a single offset impression to replace pen ruling and printing. Screening the form gives different values to the rules and breaks up the monotony that would otherwise be present in the pattern. Very satisfactory results are thus obtained in a single color printed sheet which previously required multiple handling. Large

savings of time and manpower have resulted.

In 1944 letterpress impressions in the GPO totaled about one billion, while offset impressions, not including half a billion tabulating cards, totaled 100 million.

Mr. Giegengack summed up lithography and printing in the war when he said, "With the commercial printing industry and the government, represented by the Government Printing Office, working together and doing our best, the armed forces are getting the kind of printing service to which their own efforts and their needs entitle them. We cannot do less. And we mean to keep that service at such a level that we can say with equal truth that we cannot do more." ★★

METAL DECORATING

(Continued from Page 36)

plating method after which the tin coating was fused so that it had a hot dipped tin plate appearance. This plate could be soldered like hot dipped tin plate and was satisfactory after enameling for can bodies in combination with lacquered, Bonderized steel ends for processed non-acid vegetables, meat and other products where enameled steel, Bonderized steel or terne plate could not be used.

The development and use of can solders with two to four per cent of tin instead of from 40 to 50 per cent.

The development of can seaming compounds containing either synthetic rubber or no natural rubber at all.

The development of can lacquers containing only domestic or synthetic drying oils and resins to replace those formerly imported from the Far East.

The development of methods for the high speed soldering of lacquered, Bonderized steel plate bodies so that a practically tinless container can be made if the stock pile of tin ever gets dangerously low before the end of the war or before we can get unlimited supplies of tin again.

Another development which has been accelerated during the war is

wet varnishing of the ink on metal sheets. Instead of the process of lithographing, baking, then varnishing and baking, wet varnishing allows the elimination of one of the baking processes. The sheets are lithographed, and pass directly from the press to a varnisher where the varnish is applied, and thence into the baking oven. This method has been made possible by the formulation of special inks and varnishes which will not bleed. A great deal of precious time, labor and fuel have been conserved through this method during the war.

Thus, problems have been met and solved during the war by metal decorators and by their supply firms which in normal times may have required many years of research and engineering. New uses, too, for metal lithography have been developed, which may mean broader markets when peace comes again. ★ ★

NAVY LITHOGRAPHY

(Continued from Page 49)

topside, the organization went to work but the tight delivery schedule and the nature of the material made the situation extremely awkward. It was returned to the Publications Division on waiver. Eighteen printers and lithographers were contacted without success until an enterprising lithographer was uncovered who, by ingenious sub-contracting, turned out the copies needed in the allotted time. It was a close call but a fine illustration of lithography's worth in the war effort.

The Navy holds no brief for any particular process. It utilizes every form of reproduction which will do the job but it can be said without reservation that lithography is doing its share. In the near future, Navy is planning to show its appreciation of the cooperation of graphic arts industry by awarding certificates of commendation to outstanding printers and lithographers. No doubt, the lithographic industry will be well represented on the list of recipients.★★

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Photography, Negative Making

Light Polarizing Image and Process of Manufacture. Edwin H. Land (to Polaroid Corporation). "U. S. Patent" No. 2,373,035 (May 27, 1939). The process comprising forming a sheet of a transparent plastic having long, substantially oriented chain molecules and converting predetermined portions of said sheet to dichroic light-polarizing areas, said areas forming in said sheet a predetermined image, the optical density of each of said areas being a function of the vibration direction of light incident thereon.

Halftone Photoengraving Process and Screen. Walter S. Marx, Jr. (to Printing Arts Research Laboratories). "U. S. Patent" No. 2,373,489 (October 18, 1941). In the art of halftone photo-reproduction, the steps which consist in photographing a subject, the shaded portions of which have been rendered absorbent of ultra-violet light, onto a light-sensitive plate through a halftone screen, the line elements of which are transparent to ultra-violet light and substantially opaque to visible actinic light.

Photographic Color Correction Process. Ralph M. Evans and Wesley T. Hanson, Jr. (to Eastman Kodak Co.). "U. S. Patent" No. 2,371,746 (December 12, 1942). A process of making a color-corrected photograph which comprises exposing a light-sensitive silver halide emulsion layer through a photographic color transparency with light recording an image of the color to be corrected, forming a relief image in the exposed emulsion layer of opposite sign to said transparency, dyeing said relief image with a water-soluble gray dye and printing a color-corrected picture from the combination of said transparency in registry with said relief image.

Kodak Fluorescence Process of Automatic Color Correction. F. W. Copin. Proceedings Physical Society (London), 55:371-75, No. 311, Part 5, 1943. In most photomechanical reproduction processes it is necessary to introduce corrections to compensate for deficiencies inherent in the printing inks. Such corrections are usually applied by hand on the printing plates, on the intermediate positives or negatives, or by means of photographic masking. The Kodak Fluorescence process provides a simple method of obtaining the required color correction automatically during the actual process of making separation negatives and eliminates the need for any form of hand retouching or fine-etching. This is effected by the inclusion in special water-color paints of materials which fluoresce brightly under ultraviolet radiation, but which do not alter the appearance of the paints under ordinary lighting conditions. In adjusting the amounts of the fluorescent materials included in each paint, the printing inks to be used subsequently were taken into account so that when color separation negatives are made using a suitable mixture of ultraviolet and visible radiation, extra density is added to those parts of the negatives requiring attention. The complete set of special paints consists of eighteen water colors, which are applied to a white drawing surface by the artist. The copy is then illuminated by arc lamps covered by a filter unit transmitting ultraviolet mixed with a proportion of blue-violet and green light. An adjustable slit, holding compensating filters, allows the operator to adjust the balance of illumination so as to ensure proper color correction. Both yellow and magenta printing negatives are made with the filter unit in position, while the blue-green and black printing negatives

are made with unscreened white light illuminating the copy, the latter negative being made on an infra-red-sensitive plate. (Monthly Abstract Bulletin of Eastman Kodak Co., 30, No. 12, December, 1944, p. 365).

***Controlling the Dot Structure With the Contact Screen.** A. Clair. (National Lithographer), 51: 40, 48 September, 1944. Early contact screens had silver image dots or dots embossed on a transparent film. Control of contrast was possible only through a series of screens adjusted to various types of subject. The orange screen for deep-etch lithography is used to produce a halftone positive from a magenta continuous-tone negative. Contrast is controlled by filters over the exposing light. The Kodagraph Magenta Contact screen is used to make halftone negatives directly in the camera and contrast is controlled by filters over the lens. The effective gradient of the dots in the screen is increased by the use of a yellow filter and lowered by the use of a rose filter. Normally, the exposure is made mainly through the yellow filter. Less contrasty copy requires a larger proportion of exposure with no filter. Extreme contrast is obtained by using the rose filter. (Monthly Abstract Bulletin of Eastman Kodak Co., 30, No. 12, December, 1944, p. 365).

***Wetting Agents in Lithography.** F. J. Tritton. "Modern Lithographer and Offset Printer," 41, No. 2, February, 1945, pp. 32, 38 (2 pages). Uses of wetting agents in photographic practices are discussed. A wetting agent added to the developer prevents air-bells, produces more uniform development on large plates and films, and helps remove pinholes. An addition of wetting agent to the final wash water eliminates drying marks and accelerates drying. Water-color paints, spotting colors, opaques, etc., will take more easily and uniformly if wetting agents are used.

***Color Correction by Electro-Optical Methods.** Anonymous. "British Journal of Photography," 92, No. 4429, March 23, 1945, p. 96 (1 page). A scanning beam passes through the color transparency and is broken up into its primary components by three filters. The light coming through the filters is converted into electrical impulses by means of photoelectric cells; the circuit automatically chooses the cell generating the greatest voltage. The corrected color records are printed at the same time. It is stated that the use of properly corrected color separations (including the gray printer) results in considerable saving in colored inks.

***A Cameraside Chat On Lenses.** Walter A. Kaiser. "National Lithographer," 52, No. 3, March, 1945, pp. 18, 19, 40, (3 pages). (Continued

CINCINNATI 2, OHIO

from last month). In this concluding installment, Kaiser points out that the camera back, the lens and the copy board must be "in square." Modern highly corrected lenses are designed for maximum definition at or near full aperture so that the use of large stops rather than small stops is to be preferred if depth of focus is not a factor. The function of the lens is image-forming; that of the screen, dot-forming. Process lenses, equipped with Waterhouse slots are to be preferred. Anastigmat lenses are suitable for black and white work but apochromatic types are imperative for good color work. The focal length of the lens should be greater than the diagonal of the plate and is controlled by the image area which must be accommodated at the greatest reduction required. Modern apochromatic anastigmatic lenses of the process type generally are corrected for the more serious lens faults. Curvature of field and spherical aberration can be somewhat controlled by a stopping-down, and uneven illumination of the plate because of the lens is compensated for by the normal latitude of present day emulsions. In general, distortion, coma and zonal aberration are not present in modern compound lenses.

***Process Practice** (No. 61) Colour Work, Subtractive Processes. Frank H. Smith, F. R. P. S. "Process Engraver's Monthly," 52, No. 614, February, 1945, p. 40 (1 page). The author states that the blue transmission of the blue-green ink and magenta ink is not satisfactory and that corrections are necessary. He discusses the transmission theory as applied to this problem. One method for correcting is to over-print (magenta ink on white paper and then print blue green upon it) to absorb various colour components. In practice, however, this has not proved as good as the work done by the colour retouchers and etchers.

***Kodachrome v. Direct Colour Separations.** Captain R. Donald Reed, Sn. C. U. S. Army. "Modern Lithographer and Offset Printer," 41, No. 1, January 1945, p. 12 (1 page). This is a reprint of a letter published in the British Journal of Photography. The author, from his experiences in reproducing from Kodachromes and from color separation negatives made in the ordinary way, presents some helpful information with the conclusions he has drawn. One advantage he comments on is the fact that only one mask is dealt with in Kodachrome whereas three colour correcting masks are required for direct separation work. Reference is made to the use of white pigmented cellulose acetate coated with silver halide emulsion on which prints are made for retouching from separation negatives, and their

advantage from a production viewpoint that the worker can do his retouching on prints rather than on transparencies.

***What Is Satisfactory Dot Formation?** Anonymous. "Bulletin for the Graphic Arts," No. 6, 1945, pp. 6, 7, 8 (3 pages). While the term "good dot formation" conveys different meanings to different people, depending on the particular half-tone process in which they are interested, many factors are covered by the all-inclusive term "dot formation." The following are discussed: dot shape, dot sharpness, dot density, raggedness, dot-etching quality and uniformity of size. This discussion includes the causes of various undesirable dot formations with suggestions for remedies and correct methods of obtaining desirable results.

Planographic Printing Surfaces

Method of Making Printing Plates. William Craig Toland and Ellis Bassist (to William Craig Toland). "U. S. Patent" No. 2,373,357. (November 21, 1941.) That improvement in methods of making planographic printing plates which comprises providing a base element, applying a coating of a polyvinyl alcohol on the base element, said polyvinyl alcohol being water-receptive and water-insoluble, combining the coating of polyvinyl alcohol with a photo-sensitive emulsion, said emulsion consisting of gelatin and a silver halide, exposing the film to light passed a photographic negative thereby to obtain a latent image in the photosensitive emulsion, developing the latent image to produce grains of free silver in the latent image portions, treating the grains of silver with a chromium compound to harden portions of both gelatin and polyvinyl alcohol occurring adjacent to the grains of silver, coating the plate with a greasy developing ink, and washing away unexposed portions of the emulsions to leave water-receptive surfaces of polyvinyl alcohol.

Method of Preparing Printing Plates. Ellis Bassist (to William Craig Toland). "U. S. Patent" No. 2,373,287. (July 27, 1943.) That improved process which comprises applying to a sheet material having a water-receptive surface a solution of tannic acid, applying an ink image on the surface, said ink containing oleic acid, treating the image with a lithographic etching mixture which contains ferric chloride.

***Proper Operation of the Offset Plate Whirler.** R. Ernest Beadie. "Inland Printer," 114, No. 6, March, 1945, pp. 53-56 (4 pages). The treatment of the plate preparatory to placing it in the whirler is described with emphasis on cleaning methods. The

technique in applying the coating, both albumin and deep-etch, is given. The author explains the operation of the whirler, stressing speed control and the need for uniform speed, and the type of whirler necessary for efficient operation.

***Photo - Lithography.** Bi-Metal Processes. A. Haigh and H. M. Cartwright. "Process Engraver's Monthly," 52, No. 614, February, 1945, p. 42 (1 page). The bi-metal processes are subdivided by the authors into four groups and the characteristics of each group are briefly outlined. More specific details are then given for each of the patented methods. Altogether seven separate variations are reviewed.

Equipment

***Photo - Typesetting.** Anonymous. "Modern Lithography," 13, No. 3, March, 1945, pp. 26, 27, 28, 71 (4 pages). This discussion points out the very real need of a photo-typesetting device for the lithographic industry. A review of the related development of photo lettering is made together with an extensive treatment of present developments in photo typesetting. The Westover Photo-Typograph and the Huebner Phototextype are given special attention.

Paper & Ink

***Printing Inks for Use on Plastics.** John Micik. "American Ink Maker," 23, No. 2, February, 1945, pp. 27, 29 (2 pages). The most of the printing done on plastics is done on sheet materials such as cellophane, nitrocellulose, cellulose acetate, etc.—very little is done on molded or extruded articles. Since there are five different methods of printing — letterpress, lithography, aniline, gravure and silk screen—each requiring an ink of entirely different composition, users and manufacturers of plastics should know the limitations of each process, and select the one most suited to their products.

***Paper Testing Committee Report —1944.** B. W. Scribner. "Paper Trade Journal," 120, No. 13, March 29, 1945, pp. 41, 42 (2 pages). The Committee reports the completion of and the publication of three new testing methods, six revised methods, and one corrected method during the year 1944. These include tests for water permeability, wet tensile strength, degree of curl and sizing of paper, and conditioning for testing. Some data and a brief description of these methods are given. Of special importance because of war uses of paper are the methods for testing for permeation by water and water vapor and for wet strength.

(Continued on Page 113)

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Guesses V-E Day, Wins Bond

H. P. (Hap) Angell, vice president in charge of the New York office of J. W. Clement Co., Buffalo lithographers and printers, won the \$100 war bond offered by the Round Table Club of the Baldwin Paper Co. for correctly guessing the date of final victory in Europe. Mr. Angell's prediction, made some weeks before, was correct to the day, the Baldwin company announced.

Army Map Work Honored

Army Map Service, Washington, recently sent a 38 x 48" full color reproduction of a map of Europe together with reproductions of letters from high army officials, to a number of contracting lithographers. The three letters which were lithographed across the face of the map, were from Under Secretary of War Robert Patterson, Maj. Gen. T. S. Airey, Maj. Gen. Clayton Bissell, and Maj. Gen. E. Reybold, Chief of Engineers. The former letter informed Army Map Service of the fifth war production award (Army-Navy "E"), while the other letters praised the volume, quality and speed of production of maps for use by the forces.

The maps pass along these honors to lithographers who helped to achieve this war production record.

Paper Orders Reviewed

A revised edition of the booklet "What the L," prepared by Meiric K. Dutton, Printing & Publishing Div., War Production Board, has just been distributed by the Graphic Arts Association, Washington, D. C. The booklet explains the seven "L" orders restricting paper in the graphic arts industries, revised to April 26, 1945. The booklet carries a warning on the cover that the end of the war in Europe will not bring immediate or extensive relief in the supply of printing papers.

QUOTES

FROM THE MAIL

(The following letter was written to H. L. Beem, Mart Printing Co., Chicago lithographers and printers, by a former Mart employee.)

Gentlemen:

The long, monotonous cruise out here found me reading more and more varied types of books than ever before. But I haven't read a litho magazine for so long, it would probably be hard for me to figure out. My education has been quite different in the past two-and-a-half years, but my interest has not diminished.

Camera technique is more than knowledge; a great factor being confidence in a few simple rules of light and optics. There is almost as much skill in developing as there is in correct exposure in halftone work. Line work is much more dependent upon exposure, especially when shooting colored or tinted copy. Straight foto work, continuous tone, is complicated now, due to a flood of super cameras, films, paper, lenses, filters, lights, meters, toners, driers, printers, enlargers and a thousand gadgets that attract the ardent amateur's eye.

Photolith work depends on only one kind of a negative—a good one. Negatives make or break the quality of the finished product and that makes or breaks a litho firm. All that general comment only works when labor can be depended upon to "punch in" at 8 o'clock every day. Dependable labor seems to be a grade A commodity—that puts employers in a class with service men looking forward to stabilized conditions when the war is history.

All in all I keep a perpetual alert for anything pertaining to a lens, bellows and a piece of film. My 'extra' duties as ship's photographer aboard my last ship were what I call a "break". I really do get ideas on photo-work, more than seldom.

Delbert R. Steinert F.C. 3/c
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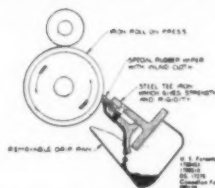
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TECHNICAL BRIEFS

(Continued from Page 109)

***Transformation of Liquids to Solids and Ink Drying.** W. H. Banks. "Patra Journal" 8, 50-4, 1944. (Chemical Abstracts, 39, No. 6, March 20, 1945, p. 1302.)

General

***Back to Fundamentals.** Anonymous. "National Lithographer," 52, No. 3, March, 1945, pp. 28, 30 (2 pages). **For the cameraman:** The use of a neutral grey scale and an ink patch of each color aids substantially in the preparation of color separation negatives either by the direct or indirect method. The use of a densitometer removes all guess work in the production of negatives. However, color correction is still necessary because of the failure of inks now in use to produce the colors desired. **For the platemaker:** Deep-etch plates are generally etched to a depth of .0005 inches to .00075 inches and deeper etching than this is not recommended because the form rollers fail to reach the work areas and the task of polishing out dirt spots becomes increasingly great. **For the pressman:** The determination of color strength is best made by "dabbing out" trial dilutions of ink in the same thickness as will be laid on by the press, and comparing directly with the copy. Come down gradually, using small amounts of the reducer and make repeated "dabbing out" tests.

***Packing the Blanket.** Oscar Diehl. "Lithographers' Journal," 29, No. 12, March, 1945, pp. 675, 686 (2 pages).

***Static Electricity—in the Printing Industries — Theory of Static Electricity—Static Collection in the Pressroom — Neutralizing.** Committee on Static Electricity of the National Fire Prevention Association, Inc. "Printing Equipment Engineer," 69, No. 6, March, 1945, pp. 18, 19, 20 (three pages). The generation of static electricity through friction and the separation of unlike materials in such cases as may be applied to various printing operations is outlined. For overcoming the difficulties introduced by static charges, the advantages of grounding the machinery, humidification of the atmosphere and collection of the charges on tinsel bars or the like, are discussed.

***Metallic Pigments II.** Stanmore V. Wilson. "American Ink Maker," 23, No. 2, February, 1945, pp. 19, 20, 21, 33 (4 pages). This is the second in a series of articles on metallic pigments.★★

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TALE ENDS

Speaking of lithography at war: Since D-Day United States pilots have dropped more than 50,000,000 leaflets on Axis territory in Europe. The record of one day was 4,400,000. Leaflet bombs consist of a cardboard container laced with an explosive primer cord and detonated by a barometric fuse which is set to scatter the leaflets at a predetermined altitude in desired concentrations. A standard leaflet bomb weighs 300 lbs. and contains 80,000 leaflets, according to *The World's Paper Trade Review*.

★

There recently have been some inquiries about copies of the offset press specifications which were published in September 1941 in ML. Copies of these specifications are now available free of charge to anyone wishing them. The chart covers Harris, Hoe, Miehle, New Era, Rutherford, Webendorfer, and Willard offset presses.

Other free reprints still available cover heat set litho inks and plastic litho press plates.

★

A complete newspaper sent across the continent by wire! That's what what *The New York Times* did at the opening of the San Francisco conference. Of the experiment *The Times* had this to say:

The four pages were set in type by THE TIMES in New York. Proofs were taken of each page. The proofs were then cut in half and were transmitted to San Francisco over the wirephoto facilities of The Associated Press, just as photographs have been transmitted for several years.

At the San Francisco office of The Associated Press, each negative of a half page of type was developed and a print of it was made.

A messenger from the publishing plant of The Richmond Independent, picked up the prints and hurried with them to his office, where photo-engravers put together the half pages in correct order, photographed the resultant full pages and made zinc engravings. From the engravings 2,000 copies of the four-page newspaper were run off on a flat-bed letter press in The Independent's plant.

MODERN LITHOGRAPHY

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ONE of the most essential requirements of the lithographer is a protective medium for the image. This protective medium must make the image ink receptive—avoid spreading as a grease would spread—and retain this ink receptivity even when stored for long periods of time. It must also repel the action of the fountain etches while getting started on the press.

Over the years many protective mediums were tried. Those that protected the image satisfactorily were not always sufficiently ink receptive. Asphaltum best met the requirements for this purpose but it also had a drawback. It was soluble in the solvents contained in the ink and completely disappeared from

the image after a very few impressions were pulled.

Harris Litho Asphaltum, one of the first products developed by the Harris Laboratories, is used in every place in lithography where ordinary asphaltum is used. It spreads readily—is ink receptive—and is resistant to the solvents in the inks and to the acids used in the fountain.

Furthermore, Harris Litho Asphaltum dissolves the ink on the image more readily than turpentine or similar solvents—thereby eliminating a step in the usual procedure which requires washing off with turpentine and then applying asphaltum.

Harris Litho Asphaltum is available in quart, gallon, and five-gallon containers

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